
Articles

Choices That Matter: Three Propositions on the Individual, Private Property, and Anthropogenic Climate Change

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ABSTRACT

This essay argues that the interaction of the concept of private property with anthropogenic climate change offers an opportunity for individuals to re-think the way they relate to the world in which they live. To do so, it offers three “propositions” concerning private property and its role in human caused climate change. The first proposition suggests that climate change reveals private property as two relationships: “social-legal” and “physical-spatial-temporal.” The consequences and outcomes of choices permitted by the social-legal relationship that constitutes private property affect other people, producing a connection between those who make the choices about goods and resources and those others who suffer the consequences. This essay calls this resulting physical-spatial-temporal relationship the “climate change relationship.” The second proposition posits that the real enemy in the climate change relationship is not so much the concept of private property but its “idea.” The regulation typically associated with

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private property can have little effect so long as people continue to have the choice conferred by private property, which is predicated upon an “idea” of property which gives little regard to the consequences of one’s actions for others. The idea therefore differs from the theory of property, which matters because private property is in fact the state’s conferral of “sovereignty” on the individual. Given the global reach of the consequences that flow from human caused climate change, this in turn means that private property allows individuals to be eco-colonialists, both spatially and temporally. The final proposition is offered in the form of a question: Assuming the existence of a moral imperative to act in the absence of governmental action to address anthropogenic climate change, could the idea of private property change, and, if it did, what might it look like? In response, the essay argues that it is possible for climate change to act as the catalyst for such a change in the idea of private property and offers some thoughts on what a changed idea might look like.

I. INTRODUCTION

While the commodification of carbon seemed *de rigueur* as recently as a year ago, the failure of United Nations (“UN”) talks in Copenhagen in late 2009 to produce a successor agreement to the Kyoto Protocol¹—opting instead for a weak political agreement²—threw into disarray those

1. Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, 37 I.L.M. 32.

2. U.N. Climate Change Conference, Dec. 7-19, 2009, U.N. Doc. FCCC/CP/2009/11/Add.1 (Mar. 30, 2010), *available at* <http://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf#page=4>; *see also* Fred Pearce, *Is It Time to Say Goodbye Cool World?*, NEWSIDENTIST, June 19, 2010, at 8, *available at* <http://www.newscientist.com/article/mg20627650.401-is-it-time-to-say-goodbye-cool-world.html>; David King, *No Cause for Climate Despair*, NEWSIDENTIST, June 15, 2010, at 3, *available at* <http://www.newscientist.com/article/mg20627652.900-david-king-no-cause-for-climate-despair.html>. While COP 15 received global attention as an historic opportunity to produce an internationally legally binding successor to the Kyoto Protocol for the mitigation of anthropogenic climate change, COP16, held November 29–December 10, 2010 in Cancún, Mexico, received understated coverage and sought modest outcomes, limited largely to incremental developments concerning multilateral processes for achieving industrialized country emissions targets and actions to reduce emissions, an agreement to prevent a gap between the Kyoto Protocol and its successor, clean development mechanisms to encourage investment in infrastructure aimed at reducing emissions, initiatives to protect the vulnerable from climate change, and various strategies aimed at adaptation to climate change: *See* U.N. Climate Change Conference, Nov. 29–Dec. 10, 2010, *The Cancun Agreements*, U.N. Doc. FCCC/CP/2010/7/Add.1, *available at* <http://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf#page=2> [hereinafter *Cancún Agreements*].

political and legal efforts to mitigate global anthropogenic (human-induced) climate change. Even governments such as those in the United States³ and Australia,⁴ which had been working toward “cap-and-trade” legislation aimed at permitting the purchase and sale of rights to emit the “Kyoto six”⁵ greenhouse gases (“GHGs”) let those initiatives lapse.⁶ In

3. See, e.g., American Clean Energy and Security Act, H.R. 2454, 111th Cong. (2009), available at <http://www.govtrack.us/congress/billtext.xpd?bill=h111-2454>; American Clean Energy Leadership Act, S. 1462, 111th Cong. (2009), available at <http://www.govtrack.us/congress/bill.xpd?bill=s111-1462>; Clean Energy Jobs and American Power Act, S. 1733, 111th Cong. (2009), available at <http://www.govtrack.us/congress/bill.xpd?bill=s111-1733>; Clean Energy Partnerships Act, S. 2729, 111th Cong. (2009), available at <http://www.govtrack.us/congress/bill.xpd?bill=s111-2729>; Clean Energy Act, S. 2776, 111th Cong. (2009), available at <http://www.govtrack.us/congress/bill.xpd?bill=s111-2776>; Carbon Limits and Energy for America's Renewal (CLEAR) Act, S. 2877, 111th Cong. (2009), available at <http://www.govtrack.us/congress/bill.xpd?bill=s111-2877>; American Power Act, S. _____, 111th Cong. (2010) (introduced by Senators Kerry (D-Massachusetts) and Lieberman (I-Connecticut)) available at <http://www.law.columbia.edu/centers/climatechange/resources/legislation/senate>. See also NICOLA DURRANT, LEGAL RESPONSES TO CLIMATE CHANGE (2010); *Let's Agree to Agree: Barack Obama and Others Admit That Copenhagen Will At Most Produce Only an Outline Climate Agreement. But That Would Be a Lot Better Than Nothing*, ECONOMIST, Nov. 21, 2009, available at http://www.economist.com/displayStory.cfm?story_id=14915108.

4. Other jurisdictions, such as Australia, are currently embroiled in their own attempts to enact climate change legislation. See, e.g., CARBON POLLUTION REDUCTION SCHEME BILL, 2009, NO. 2 (AUSTL.) available at www.aph.gov.au/library/pubs/bd/2009-10/10bd059.pdf. A suite of complementary legislative enactments were also defeated in the Australian Senate on Dec. 2, 2009.

5. See INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, FOURTH ASSESSMENT REPORT [IPCC, AR4], CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS (S. Solomon et. al. eds., 2007), available at http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg1_report_the_physical_science_basis.htm; IPCC, AR4, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY (M.L. Parry et. al. eds., 2007), available at http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg2_report_impacts_adaptation_and_vulnerability.htm; IPCC, AR4, CLIMATE CHANGE 2007: MITIGATION OF CLIMATE CHANGE: CONTRIBUTION OF WORKING GROUP III TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (B. Metz et. al. eds., 2007), available at http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_wg3_report_mitigation_of_climate_change.htm; IPCC, AR4, CLIMATE CHANGE 2007: SYNTHESIS REPORT (R.K. Pachauri et. al. eds., 2007), available at http://www.ipcc.ch/publications_and_data/publications_ipcc_fourth_assessment_report_synthesis_report.htm. The IPCC is currently working on the FIFTH ASSESSMENT REPORT (“AR5”), which will follow the same structure as AR4 and is due to be completed between 2013 and 2014. See *Activities*, IPCC, <http://www.ipcc.ch/activities/activities.htm#1> (last visited Aug. 18, 2011).

6. See Stefan Theil, *A Green Retreat: Why the Environment Is No Longer a Surefire Political Winner*, NEWSWEEK, July 12, 2010, available at <http://www.newsweek.com/2010/07/12/a-green-retreat.html>; *Let It Be: The Democrats Abandon Their Efforts to*

many cases, the pre- and post-Copenhagen debate over legislative action strained credulity. In Australia, for instance, while much of the world, including China⁷ and India,⁸ had by that time stopped questioning the science of climate change and turned attention, even if only half-heartedly, to solutions, some in the Australian Senate questioned the science of anthropogenic climate change presented by the UN Intergovernmental Panel on Climate Change⁹ and the Australian Garnaut Climate Change Review.¹⁰ In the end, the Australian legislation failed, which in itself mattered little when, in early 2010, the Prime Minister announced that climate change would not be a priority of the Australian government until at least 2013.¹¹

As a result of these failures, as of January 1, 2013, the day Kyoto expires, the world will have no binding limits on GHGs.¹² For the majority of people in developed nations who continue to see climate change as a serious threat¹³—a threat requiring action, be it governmental

Limit Emissions Through Legislation, ECONOMIST, July 29, 2010, available at <http://www.economist.com/node/16693691>; see also *Capped: The Senate's Retreat from Cap and Trade Might, One Day, Lead to a Carbon Tax. For Now It Leaves a Dreadful Mess*, ECONOMIST, July 29, 2010, available at <http://www.economist.com/node/16693293>.

7. *See Fine words: But No Specifics*, ECONOMIST, Sept. 24, 2009, available at http://www.economist.com/node/14505451?story_id=14505451.

8. *See* Jeremy Kahn, *India Cleans Up Its Act*, NEWSWEEK, Nov. 6, 2009, available at <http://www.newsweek.com/2009/11/05/india-cleans-up-its-act.html>.

9. IPCC, AR4, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS, *supra* note 5; IPCC, AR4, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY, *supra* note 5; IPCC, AR4, CLIMATE CHANGE 2007: MITIGATION OF CLIMATE CHANGE: CONTRIBUTION OF WORKING GROUP III TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, *supra* note 5; IPCC, AR4, CLIMATE CHANGE 2007: SYNTHESIS REPORT, *supra* note 5.

10. ROSS GARNAUT, THE GARNAUT CLIMATE CHANGE REVIEW (2008).

11. AUSTL. DEP'T OF CLIMATE CHANGE & ENERGY EFFICIENCY, CARBON POLLUTION REDUCTION SCHEME, May 5, 2010, available at <http://www.climatechange.gov.au/media/whats-new/cprs-delayed.aspx>; AAP, Reuters, *Rudd Delays Carbon Scheme Until 2012*, SYDNEY MORNING HERALD, Apr. 27, 2010, available at <http://www.smh.com.au/business/rudd-delays-carbon-scheme-until-2012-20100427-tp29.html?comments=41>.

12. Indeed, the recently concluded UN Climate Change Talks held in Cancún, Mexico accept the inevitability of international and domestic failure to mitigate anthropogenic climate change by adopting a number of mechanisms aimed at adaptation to the effects of such climate change. *See* Press Release, United Nations, UN Climate Change Conference in Cancún Delivers Balanced Package of Decisions, Restores Faith in Multilateral Process (Dec. 11, 2010), available at http://unfccc.int/files/press/news_room/press_releases_and_advisories/application/pdf/pr_20101211_cop16_closing.pdf; see also *Cancún Agreements*, *supra* note 2.

13. *See* the various polls at GALLUP, CLIMATE CHANGE (2010), available at <http://www.gallup.com/tag/Climate%2bChange.aspx>. These polls demonstrate that while a

or individual—this ought to cause real alarm. This essay, however, takes a different tack in response to this alarm: even if a successor to Kyoto is found, and even if domestic legislation implements cap-and-trade, a carbon tax, or some other means of alleviating GHG emissions, those solutions represent only part—perhaps not the most significant part—of a long-term response to anthropogenic climate change. For a start, cap-and-trade may simply legislate for the trading of pollution, thus placing undue faith in private property, the concept largely responsible, as this essay argues, for the problem in the first place.

And more importantly, such legislation may simply entrench the popular belief that only governments can act to prevent and alleviate the causes of climate change, thus avoiding individual responsibility for those causes and eliding the real opportunity offered by climate change—collectively “to rethink and renegotiate our wider social and political goals.”¹⁴ Perhaps the real lesson of Copenhagen may be that we have relied for too long on politicians and their failed attempts to respond to climate change. Individuals have abdicated not only political but moral responsibility for this challenge to politicians and governmental institutions, which have, in turn, failed. True, climate change clearly requires political and legislative action. Change on the political front should not be ignored. Yet, climate change also forces us to re-think the way we as individuals relate to the environment and to others—in short, it ought to encourage us to re-conceive the world in which we live and our relationship to it. Indeed, as Al Gore has said, we have entered a “period of consequences”¹⁵ placing upon us, as individuals, a moral imperative to act in the absence of international and domestic responses. Mike Hulme summarizes it this way:

[W]e need to see how we can use the idea of climate change—the matrix of ecological functions, power relationships, cultural discourses and material flows that climate change reveals—to rethink how we take forward our political, social, economic and personal projects over the decades to come. We should use climate change both as a magnifying glass and as a mirror.

majority of people in the United States and Australia continue to see climate change as a serious threat, a larger minority in the former see its seriousness as exaggerated and in the former fewer consider human activities to be responsible for it.

14. Mike Hulme, *The True Meaning of Climate Change*, NEWSCIENTIST, Sept. 5, 2009, at 28–29, available at <http://www.350resources.org.uk/2009/09/05/the-true-meaning-of-climate-change-by-mike-hulme/>; see also MIKE HULME, WHY WE DISAGREE ABOUT CLIMATE CHANGE: UNDERSTANDING CONTROVERSY, INACTION AND OPPORTUNITY 362 (2009) [hereinafter HULME, WHY WE DISAGREE].

15. AL GORE, AN INCONVENIENT TRUTH: THE PLANETARY EMERGENCY OF GLOBAL WARMING AND WHAT WE CAN DO ABOUT IT 100–01 (2006) [hereinafter GORE, AN INCONVENIENT TRUTH] (citing Winston Churchill, 1936).

As a magnifier, climate change allows us to conduct examinations—both more forensic and more honest than we have been used to—of each of our human projects: whether they be projects of personal well-being, self-determination, liberated or localised trade, poverty reduction, community-building, demographic management, or social and psychological health. Climate change demands that we focus on long-term implications of short-term choices, that we recognise the global reach of our actions, and that we are alert both to material realities and to cultural values. And as mirror, climate change teaches us to attend more closely to what we really want to achieve for ourselves and for humanity.¹⁶

It might, therefore, be much more worthwhile for individuals to look for ways to reclaim some of the responsibility for acting on climate change typically relinquished to and expected of governments.

This essay argues that the concept of private property offers an opportunity for individuals to re-think the way they relate to the world in which they live. To do so, it offers three “propositions”¹⁷ concerning private property and its role in human caused climate change. The first, in Section II, suggests that climate change reveals private property as two relationships. Contemporary property theory characterizes property as a “social-legal relationship”—social relationships, mediated by law, amongst people embodying liberal choice in relation to the use and control of goods and resources. This is the first, constitutive, relationship of private property. Yet, related to this is a second relationship, a product of the first, which this essay calls “physical-spatial-temporal.” The consequences and outcomes of choices permitted by the social-legal relationship that constitutes private property affect other people, producing a connection between those who make the choices about goods and resources and those others who suffer the consequences. This essay calls this physical-spatial-temporal relationship the “climate change relationship,” and it is necessary, along with the first relationship, to understand both the role of private property in climate change and its

16. HULME, *WHY WE DISAGREE*, *supra* note 14, at 362–63; *see also* GORE, *AN INCONVENIENT TRUTH*, *supra* note 15; AL GORE, *EARTH IN THE BALANCE: ECOLOGY AND THE HUMAN SPIRIT* (1993) [hereinafter GORE, *EARTH IN THE BALANCE*]; AL GORE, *OUR CHOICE: A PLAN TO SOLVE THE CLIMATE CRISIS* (2009) [hereinafter GORE, *OUR CHOICE*]; JAMES HANSEN, *STORMS OF MY GRANDCHILDREN: THE TRUTH ABOUT THE COMING CLIMATE CATASTROPHE AND OUR LAST CHANCE TO SAVE HUMANITY* (2009); MICHAEL S. NORTHCOFF, *A MORAL CLIMATE: THE ETHICS OF GLOBAL WARMING* (2007).

17. I borrow this use of “proposition” from ALFRED F. YOUNG, *LIBERTY TREE: ORDINARY PEOPLE AND THE AMERICAN REVOLUTION* 300 (2006) to capture the formative and tentative nature of the arguments made in this essay, open to debate and further refinement through dialogue.

potential for allowing people to take personal, individual action in response.

Section III outlines the second proposition: the real enemy behind anthropogenic climate change is not so much the concept of private property but its “idea.” Any successor agreement to Kyoto and consequent domestic legislative initiatives represent attempts to use law to control and regulate the choice conferred by private property—the choice conferred by private property and its regulation constitute the “legal” in the social-legal relationship that constitutes private property. Yet regulation can have little effect so long as people continue to have choice predicated upon an “idea” of property giving little regard to the consequences of one’s actions for others. While most theorists use “idea” synonymously with “concept,” this essay defines it in the deeper, intuitive, psychological sense of what property means to those who hold it. In short, I define the idea of property according to its lay understanding, as distinguished from the legal-philosophical understanding¹⁸—the classic Blackstonian “sole and despotic dominion.”¹⁹

It matters that the “idea” of private property differs from the “concept” of property for two reasons. First, drawing upon the seminal work of Morris Cohen,²⁰ it matters because private property, a seemingly private law creation, is in fact the state’s conferral of “sovereignty” on the individual. And in the context of the climate change relationship, that sovereignty takes on new meaning with far-reaching, global consequences. The consequences or “externalities” of climate change produced by private property give individuals both a spatial reach—global, as opposed to national or legal jurisdictional—as well as a temporal one—affecting future generations as well as our own. Thus, private property allows individuals to be eco-colonialists, both spatially and temporally.

Section IV presents the final proposition in the form of a question. Assuming the existence of a moral imperative to act in the absence of

18. See STEPHEN R. MUNZER, *A THEORY OF PROPERTY* 15–36 (1990); JEREMY WALDRON, *THE RIGHT TO PRIVATE PROPERTY* 3–61 (1988).

19. Private property is “...that sole and despotic dominion which one man claims and exercises over the external things of the world, in total exclusion of the right of any other individual in the universe.” WILLIAM BLACKSTONE, *COMMENTARIES ON THE LAWS OF ENGLAND, THE RIGHTS OF THINGS VOLUME II* (Univ. of Chicago Press, 1979) (1766); see also David Schorr, *How Blackstone Became a Blackstonian*, 10 *THEORETICAL INQUIRIES* L. 103, 103–04 (2009); Robert P. Burns, *Blackstone’s Theory of the “Absolute” Rights of Property*, 54 *U. CIN. L. REV.* 67, 76 (1985); Carol M. Rose, *Canons of Property Talk, or, Blackstone’s Anxiety*, 108 *YALE L.J.* 601, 603 (1998).

20. Felix S. Cohen, *Dialogue on Private Property*, 9 *RUT. L. REV.* 357–72 (1954).

governmental action to address anthropogenic climate change, could the idea of private property change, and if it did, what might it look like? While Section IV does not offer a comprehensive answer, it argues that such a change is essential, for if the idea does not change, then there is no possibility for climate change to have a transformative effect upon the way we live our lives, the way we relate to the environment and to others, and on our broader social and political goals. Tentatively, then, this final Section argues that it is possible for climate change to act as the catalyst for such a change in the idea of private property and offers some thoughts on what a changed idea might look like.

Section V concludes along the following lines. Some argue that it matters little what we do to or for the earth, because whatever will happen over the long-term will happen anyway, whatever we do.²¹ That may be true. But when individuals use the earth as a tool for the exercise of the power, control, and choice conferred by private property in respect of others in the short-term, then what we do to or for the earth *does* matter. Viewed through the lens of climate change, control over the lives of others is precisely what private property allows.

II. PROPOSITION ONE: THE INTERACTION BETWEEN PRIVATE PROPERTY AND CLIMATE CHANGE INVOLVES TWO RELATIONSHIPS

Little doubt exists today that private property, as a concept, involves relationships. Joseph William Singer puts it this way: “[p]roperty concerns legal relations among people regarding control and disposition of valued resources.”²² And to emphasize the point, Singer adds, “[n]ote well: Property concerns relations *among people*, not relations between people and things.”²³ This essay refers to the relational understanding of private property as “social-legal,” capturing a conclusion about property involving the accumulation of research stretching back to the American legal realist movement, through Critical Legal Studies and culminating in the modern “property as social relations” approach or view.²⁴ This

21. See George F. Will, *The Earth Doesn't Care About What Is Done To or For It*, NEWSWEEK, Sept. 12, 2010, at 19, available at <http://www.newsweek.com/2010/09/12/george-will-earth-doesn-t-care-what-is-done-to-it.html>.

22. JOSEPH WILLIAM SINGER, PROPERTY 3 (Aspen Publishers 3d ed. 2010) (1954) [hereinafter SINGER, PROPERTY].

23. *Id.* (emphasis in original).

24. See STEPHEN R. MUNZER, *Property as Social Relations*, in NEW ESSAYS IN THE LEGAL AND POLITICAL THEORY OF PROPERTY 36–37 (2000).

The social relations approach or view can be traced to Wesley Newcomb Hohfeld,

“social-legal” conclusion is central to understanding the human role in climate change. Yet, as significant as that relationship is, human-caused climate change that is predicated upon private property reveals a second, equally important relationship, which this essay refers to as “physical-spatial-temporal.” The former is constitutive of private property, the latter is a product of it, and both are necessary to an understanding of why private property is both part of the problem and the source of a solution to anthropogenic climate change.

one of the fathers of legal realism and the father of the bundle metaphor. *See* Wesley Newcomb Hohfeld, *Some Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 23 YALE L.J. 16 (1913) [hereinafter Hohfeld, *Some Fundamental Legal Conceptions I*]; Wesley Newcomb Hohfeld, *Some Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 26 YALE L.J. 710 (1917) [hereinafter Hohfeld, *Some Fundamental Legal Conceptions II*]; WESLEY NEWCOMB HOHFELD, FUNDAMENTAL LEGAL CONCEPTIONS AS APPLIED IN JUDICIAL REASONING (Walter Wheeler Cook ed., Yale Univ. Press 1919) [hereinafter HOHFELD, FUNDAMENTAL LEGAL CONCEPTIONS I]; WESLEY NEWCOMB HOHFELD, FUNDAMENTAL LEGAL CONCEPTIONS AS APPLIED IN JUDICIAL REASONING II (Walter Wheeler Cook ed., Yale Univ. Press 1923) [hereinafter HOHFELD, FUNDAMENTAL LEGAL CONCEPTIONS II].

The American legal realists subsequently developed Hohfeld’s thinking. *See* Robert L. Hale, *Coercion and Distribution in a Supposedly Non-Coercive State*, 38 POLITICAL SCIENCE QUARTERLY 470 (1923); Morris R. Cohen, *Property and Sovereignty*, XIII CORNELL L.Q. 8 (1927); Robert L. Hale, *Bargaining, Duress, and Economic Liberty*, 43 COLUM. L. REV. 603 (1943); Felix S. Cohen, *supra* note 20.

Contemporary scholars extensively developed and expanded the early realist work. *See* Jennifer Nedelsky, *Reconceiving Rights as Relationship*, 1 REV. CONST. STUD./REVUE D’ÉTUDES CONSTITUTIONNELLES 1 (1993); Duncan Kennedy, *The Stakes of Law, or Hale and Foucault!*, 15 LEGAL STUD. F. 327 (1991); JOSEPH WILLIAM SINGER, THE EDGES OF THE FIELD: LESSONS ON THE OBLIGATIONS OF OWNERSHIP (2000); JOSEPH WILLIAM SINGER, ENTITLEMENT: THE PARADOXES OF PROPERTY (2000) [hereinafter SINGER, ENTITLEMENT]; SINGER, PROPERTY, *supra* note 22; Joseph William Singer, *The Legal Rights Debate in Analytical Jurisprudence from Bentham to Hohfeld*, 1982 WIS. L. REV. 975 (1982) [hereinafter Singer, *The Legal Rights Debate*]; Joseph William Singer, *The Ownership Society and Takings of Property: Castles, Investments, and Just Obligations*, 30 HARV. ENVTL. L. REV. 309 (2006) [hereinafter Singer, *Ownership Society*]; Joseph William Singer, *The Reliance Interest in Property*, 40 STAN. L. REV. 611 (1988); Joseph William Singer, *Re-Reading Property*, 26 NEW ENG. L. REV. 711 (1992); Joseph William Singer & Jack M. Beermann, *The Social Origins of Property*, 6 CAN. J. L. & JURISPRUDENCE 217 (1993); CAROL M. ROSE, PROPERTY & PERSUASION: ESSAYS ON THE HISTORY, THEORY, AND RHETORIC OF OWNERSHIP (1994); C. Edwin Baker, *Property and its Relation to Constitutionally Protected Liberty*, 134 U. PA. L. REV. 741 (1986); LAURA S. UNDERKUFFLER, THE IDEA OF PROPERTY: ITS MEANING AND POWER (2003) [hereinafter UNDERKUFFLER, THE IDEA OF PROPERTY]; Laura S. Underkuffler, *On Property: An Essay*, 100 YALE L.J. 127 (1990).

*A. Constitutive of: Social-Legal (Private property)*²⁵

Classical liberalism and its notion of individual freedom and rights permeate the core of the relationship constitutive of the modern conception of private property found in all modern legal systems.²⁶ And behind that stands the liberal moral order dominating political life the world over since Locke and Grotius: one begins with an atomistic individual who is given rights structured to serve the needs of ordinary life—a “life project” (the values and ends of a preferred way of life)²⁷ by a political society which emerges to protect the individual’s rights.²⁸ The liberal concept of private property mirrors this classical liberal contractarian moral order. Thus, to give a life project meaning, liberalism posits that some power, control, or choice over the use and control of goods and resources is necessary. Private property, through a “bundle” of legal relations (rights), created, conferred, and enforced by the state,²⁹ achieves that objective.³⁰

At a minimum, the bundle conferred typically includes the “liberal triad”: use, exclusivity, and disposition.³¹ One may use one’s car (or, with few exceptions, any other tangible or intangible good, resource, or item of social wealth), for example, to the exclusion of all others, including destruction of the item (this is private management—or the rights of use and exclusivity), and may dispose of it through market or other transactions. And all of this may be done in any way the holder sees fit to suit personal preferences and desires.³² We could also put this

25. On social-legal relationships, see WILLIAM TWINING, *GENERAL JURISPRUDENCE: UNDERSTANDING LAW FROM A GLOBAL PERSPECTIVE* ch. 15, 1–7 (2009), *available at* www.cambridge.org/twining.

26. See MUNZER, *supra* note 18, at 15–36; WALDRON, *supra* note 18, at 3–61.

27. See Michael J. Sandel, *Introduction*, in *LIBERALISM AND ITS CRITICS* 1 (Michael J. Sandel ed., 1984); J.W. HARRIS, *LEGAL PHILOSOPHIES* 277–300 (Oxford Univ. Press 2d ed. 2004) (1980); Jeremy Waldron, *Liberalism*, in *THE SHORTER ROUTLEDGE ENCYCLOPEDIA OF PHILOSOPHY* 570–76 (Edward Craig ed., Rutledge 2d ed. 2005) (1998).

28. This is a highly condensed summary of CHARLES TAYLOR, *A SECULAR AGE* 159–71 (2007).

29. For various accounts of the liberal conception of private property, see WALDRON, *supra* note 18; MUNZER, *supra* note 18. See generally MARGARET JANE RADIN, *REINTERPRETING PROPERTY* (1993); SINGER, *PROPERTY*, *supra* note 22, at 3–20.

30. This was first suggested in G.W.F. HEGEL, *PHILOSOPHY OF RIGHT* (T.M. Knox trans., Clarendon Press 1952) (1820).

31. RADIN, *supra* note 29, at 121–23. On the issue of essential rights, see generally Thomas W. Merrill, *Property and the Right to Exclude*, 77 NEB. L. REV. 730, 734–35 (1998); Lior Strahilevitz, *Information Asymmetries and the Right to Exclude* 104 MICH. L. REV. 1835 (2006).

32. See generally JOHN STUART MILL, *ON LIBERTY* (Gertrude Himmelfarb ed., Penguin Books 1974) (1859) (on Mill’s “self-regarding act”); see Joseph William Singer,

in the language of liberal theory—rights are a shorthand way of saying that individuals enjoy choice—the ability to set agendas³³—about the control and use of goods and resources in accordance with and to give meaning to a chosen life project.

To this simplified liberal account must be added the social, relational, dimension: as Singer pointed out, choice (or power and control) only exists as a product of relationship between individuals in respect of things. Wesley Newcomb Hohfeld summarized this truth in “jural opposites”—a right (choice) to do something carries with it a corresponding duty (a lack of choice) to refrain from interfering with the interest protected by the right.³⁴ The liberal individual holds choice, the ability to set an agenda about a good or resource, then, while all others (the community, society) are burdened with a lack of choice as concerns that good or resource:

[Private] property [i]s a claim that other people ought to accede to the will of the owner, which can be a person, a group, or some other entity. A specific property right amounts to the *decisionmaking authority* of the holder of that right.³⁵

Rights would clearly be meaningless if this were not the case. In this web of “asymmetrical”³⁶ legal relationships, constitutive of the rights that comprise it, we find the liberal concept of private property.

Seen in this way, as a social-legal relationship, private property is not only the power to control and use goods and resources, but also, and more significantly, to control, to make choices, to set agendas, and to make decisions about the rights of others. Identifying the importance of relationship reveals the reality that private property and non-property rights overlap; choices made by those with the private property rights

How Property Norms Construct the Externalities of Ownership, in GREGORY S. ALEXANDER ET AL., *PROPERTY AND COMMUNITY* 66-70 (2010) (outlining how property norms assist in determining the difference between a truly self-regarding act and one that is not) [hereinafter Singer, *Property Norms*]; MUNZER, *supra* note 18, at 3–9; SINGER, *ENTITLEMENT*, *supra* note 24, at 30. The seminal modern work on self-regarding acts is Singer, *The Legal Rights Debate*, *supra* note 24. *But see* Gregory S. Alexander, *Property as Propriety*, 77 NEB. L. REV. 667, 699 (1998); J.W. HARRIS, *PROPERTY AND JUSTICE* 29, 31, 105 (1996).

33. This is an adaptation of a phrase coined by Larissa Katz, *Exclusion and Exclusivity in Property Law*, 58 U. TORONTO L.J. 275, 275 (2008).

34. Hohfeld, *Some Fundamental Legal Conceptions I*, *supra* note 24, at 30; Hohfeld, *Some Fundamental Legal Conceptions II*, *supra* note 24; HOHFELD, *FUNDAMENTAL LEGAL CONCEPTIONS I*, *supra* note 24; HOHFELD, *FUNDAMENTAL LEGAL CONCEPTIONS II*, *supra* note 24.

35. Baker, *supra* note 24, at 742–43 (emphasis added).

36. This phrase was coined by David Lametti, *The Concept of Property: Relations Through Objects of Social Wealth*, 53 U. TORONTO L.J. 325, 345 (2003).

have the potential to create negative outcomes—consequences, or “externalities”—for those with the non-property rights.³⁷ Every legal system acknowledges the problem of externalities, “tak[ing] for granted that owners have *obligations* as well as rights and that one purpose of property law is to regulate property use so as to protect the security of neighboring owners and society as a whole.”³⁸ The state, then, both exerts power to create, confer, and protect the decisionmaking authority of private property vested in the individual and, more importantly, through regulation, mediates the socially contingent, relational boundary between the private property of holders and the non-property rights of others. Thus, the tension between unfettered private property rights and obligations is the *essence* of private property.³⁹

This brings us back to the liberal theory with which we began. Private property as a social-legal relationship reveals an important, yet paradoxical, dimension of the choice so central to liberalism. An individual’s freedom to choose a life project also means—in the province of politics and adjudication (through electing representatives, who enact laws and appoint judges who interpret those laws according to ideological agendas)⁴⁰—the freedom to choose the context within which that life project is lived. In other words, the individual exercises the freedom to choose the laws, relationships, and communities that constitute the political and legal order. This in turn defines the scope of one’s rights—choice, agenda-setting, decisionmaking authority—and the institutions that confer, protect, and enforce it. Individuals, therefore, as much choose the regulation of property (through political and judicial processes) as they do the control and use of the goods and resources subject to it.⁴¹

37. See Singer, *Property Norms*, *supra* note 32, at 59.

38. *Id.* at 60 (emphasis in original).

39. SINGER, ENTITLEMENT, *supra* note 24, at 204.

40. See generally DUNCAN KENNEDY, A CRITIQUE OF ADJUDICATION {FIN DE SIÈCLE} (1997) [hereinafter DUNCAN KENNEDY, A CRITIQUE OF ADJUDICATION]; ROBERTO MANGABEIRA UNGER, THE CRITICAL LEGAL STUDIES MOVEMENT (1983); Kerry Rittich, *Who's Afraid of the Critique of Adjudication?: Tracing the Discourse of Law in Development*, 22 CARDOZO L. REV. 929 (2001).

41. I am most grateful to Joseph William Singer for bringing this crucial point to my attention. See also Stephen Gardiner, *A Perfect Moral Storm: Climate Change, Intergenerational Ethics, and the Problem of Corruption*, in POLITICAL THEORY AND GLOBAL CLIMATE CHANGE 32 (Steve Vanderheiden ed., 2008).

B. Produced by: Physical-Spatial-Temporal (Climate change)

While the exploration of social-legal relationships dominates contemporary theoretical debate about property,⁴² the externalities of such relationships bear the potential to produce many other types of relationships, not legal-social, but physical-spatial.⁴³ As we have seen, this is particularly so with the externalities associated with private property, and Joseph William Singer provides an apt summary of such relationships:

[private] property owners and the public are linked to each other through individual actions [choices] and laws affecting the use of [private] property (which can . . . be both beneficial and detrimental). From this perspective, we could conceive of [private] property as a type of ecosystem, with every private action and legislative mandate potentially affecting the interests of other organisms.⁴⁴

Yet, in addition to the physical-spatial, anthropogenic climate change reveals, and is a stark example of, another dimension—the temporal.⁴⁵ These externalities will be felt not only by those of us who are here now, but also by our descendants of future generations. This section outlines in turn the physical-spatial and the temporal dimensions that together comprise the physical-spatial-temporal “climate change relationship” produced by private property.

1. Physical-Spatial

While the science of anthropogenic climate change is complex, it is clear that humans, through our choices, produce the GHGs that enhance the natural greenhouse effect, which heats the Earth’s surface and warms its oceans. Private property facilitates the activities of individuals, both human and corporate. Humans and corporations create agendas that dictate the use of goods and resources that emit GHGs. Agendas run the

42. See TWINING, *supra* note 25, at ch. 15, 1–7; WILLIAM TWINING, GLOBALISATION AND LEGAL THEORY (2000); William Twining, *Law, Justice and Rights: Some Implications of a Global Perspective* 4 (Jan. 2007) (unpublished draft), available at http://www.ucl.ac.uk/laws/academics/profiles/twining/Law_Justice%20_Rights.pdf [hereinafter Twining, *Law, Justice and Rights*].

43. On the physical-spatial relationship, see TWINING, *supra* note 25, at ch. 15, 1–7.

44. Singer, *Ownership Society*, *supra* note 24, at 334 n.82.

45. On the importance of the temporal dimension from the perspective of socio-legal theory, see EDWARD W. SOJA, POSTMODERN GEOGRAPHIES: THE REASSERTION OF SPACE IN CRITICAL SOCIAL THEORY 122–24 (1989).

gamut of our chosen life projects: what we wear, where we live, what we do there, how we travel from place to place and so forth. Corporate choices are equally important, for they structure the range of choice available to individuals in setting their own agendas, thus conferring on corporations the power to broaden or restrict the meaning of private property in the hands of individuals. Green energy (solar or wind power), for instance, remains unavailable to the individual consumer if no corporate energy provider is willing to produce it.

Among other effects, through human interconnectedness with the non-human environment,⁴⁶ the enhancement of the natural greenhouse effect produces two principal sorts of externalities. First, adverse outcomes, not only for others—in the form of drought and desertification and the melting of polar sea ice (especially in the north) and rising sea levels, in turn increasing the intensity of extreme weather events⁴⁷—but also for the larger world of all living things—such as loss of species and their habitat with corresponding biodiversity loss.⁴⁸ Second, and following from the first, those externalities do not end at the borders, physical or legal, of a good or resource; choices are not made in a vacuum, but take place within a web of physical and spatial relationships. Everyone is affected, with the poor and disadvantaged of the developing world disproportionately bearing the brunt of the human consequences of climate change⁴⁹ in the form of decreasing security, health problems, food shortages, and increased stress on available water

46. See JOHN HOUGHTON, *GLOBAL WARMING: THE COMPLETE BRIEFING* 201–05 (Cambridge Univ. Press 3rd ed. 2004) (1994); Shahid Naeem, *The Life of the Party*, in *CLIMATE CHANGE: PICTURING THE SCIENCE* 113 (Gavin Schmidt and Joshua Wolfe eds., 2009); Peter D. Burdon, *Wild Law: The Philosophy of Earth Jurisprudence*, 35 *ALTERNATIVE L.J.* 14 (2010); *ECOLOGY AND THE ENVIRONMENT: PERSPECTIVES FROM THE HUMANITIES* (Donald K. Swearer et al. eds., 2009) [hereinafter *ECOLOGY AND THE ENVIRONMENT*].

47. See IPCC, AR4, *CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS*, *supra* note 5; IPCC, AR4, *CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY*, *supra* note 5; IPCC, AR4, *CLIMATE CHANGE 2007: MITIGATION OF CLIMATE CHANGE: CONTRIBUTION OF WORKING GROUP III TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE*, *supra* note 5; IPCC, AR4, *CLIMATE CHANGE 2007: SYNTHESIS REPORT*, *supra* note 5; Adam Sobel, *Going to Extremes*, in *CLIMATE CHANGE: PICTURING THE SCIENCE*, *supra* note 46, at 95.

48. See HOUGHTON, *supra* note 46, at 127–31; HANSEN, *supra* note 16, at 237–77; Naeem, *supra* note 46, at 118–31; Burdon, *supra* note 46.

49. IPCC, AR4, *CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY*, *supra* note 5. For a succinct and compelling summary of the science and the role of liberalism, see JEDEDIAH PURDY, *A TOLERABLE ANARCHY: REBELS, REACTIONARIES, AND THE MAKING OF AMERICAN FREEDOM* 187, 215–22, 225–28 (2009) [hereinafter *PURDY, A TOLERABLE ANARCHY*]; Jedediah Purdy, *Climate Change and the Limits of the Possible*, 18 *DUKE ENVTL. L. & POL'Y F.* 289 (2008).

supplies.⁵⁰ Indeed, Purdy writes that:

[c]limate change threatens to become, fairly literally, the externality that ate the world. The last two hundred years of economic growth have been not just a preference-satisfaction machine but an externality machine, churning out greenhouse gases that cost polluters nothing and disperse through the atmosphere to affect the whole globe.⁵¹

Consider human security, predicted to decrease both within countries affected directly by climate change, and in those indirectly affected through the movement of large numbers of people displaced by the direct effects of climate change in their own countries.⁵² In the case of rising sea levels, for instance, sixty percent of the human population lives within 100 kilometers of the ocean, with the majority in small- and medium-sized settlements on land no more than five meters above sea level.⁵³ Even the modest sea level rises predicted for these places will result in a massive displacement of “climate” or “environmental refugees.”⁵⁴

2. Temporal

Not only are the consequences or externalities of anthropogenic climate change unconstrained by the legal or physical borders of states, they are uncontainable in time.⁵⁵ In other words, climate change

50. These consequences are well-documented. See IPCC, AR4, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS, *supra* note 5; IPCC, AR4, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY, *supra* note 5; IPCC, AR4, CLIMATE CHANGE 2007: MITIGATION OF CLIMATE CHANGE, *supra* note 5; IPCC, AR4, CLIMATE CHANGE 2007: SYNTHESIS REPORT, *supra* note 5; GORE, AN INCONVENIENT TRUTH, *supra* note 15; NICHOLAS STERN, STERN REVIEW: THE ECONOMICS OF CLIMATE CHANGE (2006), available at http://www.hm-treasury.gov.uk/stern_review_report.htm; GARNAUT, *supra* note 10; Andrew J. Weaver, *The Science of Climate Change*, in HARD CHOICES: CLIMATE CHANGE IN CANADA 13, 25 (Harold Coward et al. eds., 2004) (Fig. 2.8. Schematic Diagram of Observed Variations, (a) Temperature Indicators).

51. PURDY, A TOLERABLE ANARCHY, *supra* note 49, at 187.

52. See GWYNNE DYER, CLIMATE WARS: THE FIGHT FOR SURVIVAL AS THE WORLD OVERHEATS 13–14 (2010).

53. Steve Loneran, *The Human Challenges of Climate Change*, in HARD CHOICES, *supra* note 50, at 51–53; C. Small and R. J. Nicholls, *A Global Analysis of Human Settlement in Coastal Zones*, 19 J. COASTAL RESEARCH 584, 584–99 (2003).

54. Loneran, *supra* note 53, at 45–71, 51–53; GARNAUT, *supra* note 10, at 147–50.

55. CHRIS PARK, OXFORD DICTIONARY OF ENVIRONMENT AND CONSERVATION 232 (2009) (“intergenerational equity”); Stephen Gardiner, *A Perfect Moral Storm: Climate Change, Intergenerational Ethics, and the Problem of Corruption*, in POLITICAL THEORY AND GLOBAL CLIMATE CHANGE, *supra* note 41, at 30–35; HULME, WHY WE DISAGREE, *supra* note 14, at 132–38; HANSEN, *supra* note 16, at 237–77; NORTHCOTT, *supra* note 16,

demonstrates very clearly a temporal dimension to the choices predicated upon private property.⁵⁶ Demonstrating this involves a rather complex cost-benefit analysis of taking action to control emissions and so ameliorate climate change now as against taking those same actions at some future time.⁵⁷ Put simply, economic theory posits that, as a consequence of economic growth and cost discount rates based on interest rates, the cost of taking an action in the future is almost always less than the cost of taking the same action now. Such a calculus is typically based on a cost discount rate of five percent per annum; climate change, however, is a "severely lagged" and "substantially deferred" phenomenon⁵⁸ involving very long-term costs, which means that in only two decades the costs to future generations of harms from climate change are discounted to near zero.⁵⁹ According to "this logic, the benefits of economic activities which threaten harms to future generations beyond twenty years always outweigh the costs."⁶⁰ And it is this sort of logic that drives the governmental failure to take action, or even to take climate change seriously today, especially when such action requires decisions to reduce dependency on a fossil-fuel based economy:

If the costs of climate change cannot be clearly quantified, and therefore demonstrated to exceed the costs of adaptation, then no action that would harm the US economy should be taken to reduce fossil-fuel use. However, this approach neglects the gravity of the problems that future generations will face if climate change is not mitigated by action now.⁶¹

Some strongly criticize the use of economic analysis and mathematics to make what are essentially moral decisions about the scale of values in different societies. Yet, the fact is, whether one agrees or not, such analyses are relied upon and calculations are made, which militate against the steps that might be taken to mitigate climate change.⁶² Further,⁶³ the economic analyses and calculations used to avoid action today will be "iterated," meaning that "[e]ach new generation will face the same incentive structure as soon as it gains the power to decide

at 145–48.

56. Gardiner, *supra* note 55, at 31.

57. NORTHCOTT, *supra* note 16, at 146.

58. Gardiner, *supra* note 55, at 31.

59. NORTHCOTT, *supra* note 16, at 146; HULME, WHY WE DISAGREE, *supra* note 14, at 132–38.

60. NORTHCOTT, *supra* note 16, at 146.

61. *Id.*

62. *Id.* at 146–47, citing STERN, *supra* note 50, at 278–79.

63. *Id.*

whether to act or not.”⁶⁴ In short, this is a matter of intergenerational equity, which seeks “a fair distribution of the costs and benefits of a long-term environmental policy, when costs and benefits are borne by different generations.”⁶⁵ Mike Hulme summarizes it this way: “put . . . crudely, how much do we care about our own welfare (read, ‘consumption’) rather than the welfare of others (read, ‘foregone consumption’).”⁶⁶ Either way, a choice is being made about how to use goods and resources. And those choices bear consequences for others, and about their values and cultures, both today and in the future.⁶⁷

And future generations have much to lose from this present inaction based upon economics and mathematics. We have seen that the externalities of climate change for those here now, both human and non-human, are dire. For those of future generations, they are extreme and potentially catastrophic.⁶⁸ James Hansen paints a graphic picture of what the world may look like for future generations, a world to which our choices, predicated on private property, are today contributing. This is a world in which global warming reaches a magnitude that will lead eventually to an ice-free planet, with a sea level rise of almost 250 feet.⁶⁹ Even a projected sea level rise of only eighteen to twenty feet will mean that “[t]he maps of the world will need to be redrawn.”⁷⁰ This will, in turn, influence a complex process of ocean cooling at higher latitudes and warming at low latitudes, together causing increases in the strength of thunderstorms, tornadoes, and tropical storms such as hurricanes and typhoons. Ultimately, this could lead to global conflict (some argue it already has),⁷¹ affecting populations that are one or two orders of a magnitude greater than the number of people displaced by Hurricane Katrina in 2005.⁷² For people living in affected areas in the future:

64. Gardiner, *supra* note 55, at 33 (footnote omitted).

65. PARK, *supra* note 55.

66. HULME, WHY WE DISAGREE, *supra* note 14, at 133 (2009).

67. *Id.* at 135; HANSEN, *supra* note 16, at 237–77.

68. Gardiner, *supra* note 55, at 32–35; Gavin Schmidt, *The Prognosis for the Climate*, in CLIMATE CHANGE: PICTURING THE SCIENCE, *supra* note 46, at 195; CHARLES OFFICER & JAKE PAGE, WHEN THE PLANET RAGES: NATURAL DISASTERS, GLOBAL WARMING, AND THE FUTURE OF THE EARTH (rev'd ed., 2009); STEPHAN FARIS, FORECAST: THE CONSEQUENCES OF CLIMATE CHANGE, FROM THE AMAZON TO THE ARCTIC (2009).

69. HANSEN, *supra* note 16, at 250.

70. GORE, AN INCONVENIENT TRUTH, *supra* note 15, at 196–97 (citing Sir David King); *see also* the images of San Francisco, Florida, Netherlands, Beijing, Calcutta, Bangladesh, and New York, at 198–209.

71. CLEO PASKAL, GLOBAL WARRING: HOW ENVIRONMENTAL, ECONOMIC AND POLITICAL CRISES WILL REDRAW THE WORLD MAP (2010); DYER, *supra* note 52.

72. HANSEN, *supra* note 16, at 252–53, 257–59.

changes will be momentous. China, despite its growing economic power, will have great difficulties as hundreds of millions of Chinese are displaced by rising seas. With the submersion of Florida and coastal cities, the United States may be equally stressed. Other nations will face greater or lesser impacts. Given the global interdependencies, there may be a threat of collapse of economic and social systems.⁷³

Hansen concludes:

continued unfettered burning of all fossil fuels will cause the climate system to pass tipping points, such that we hand our children and grandchildren a dynamic situation that is out of their control.⁷⁴

The power, control, and choice over goods and resources conferred by private property brings those who exercise such power and make those choices into a relationship that spans both the physical-spatial and the temporal. This essay calls this the climate change relationship, which is intended to reflect the fact that choices made today have the potential to affect not only one's neighbor across the street, but also across the globe, and not only for the current generation, but also future ones.

III. PROPOSITION TWO: THE "IDEA" OF PRIVATE PROPERTY AND WHY IT MATTERS

A. The "Idea" of Private Property

The *concept* of private property, while it explains what private property is, and reveals the climate change relationship, is the province of theorists, an abstraction not readily apparent to the layperson.⁷⁵ As elaborated by theorists, the concept fails to account for how real-world, flesh-and-blood, socially-situated people actually *understand* what private property *means*. And if private property is self-seeking choice, then it matters what such people *think* that they have when faced with making a decision about where they live, how they get there, what they wear, and so forth. This essay refers to this belief, this understanding about what private property is and what it allows as its "idea." This forms the subject of the second proposition: the idea, and not the concept of theorists, represents the real villain behind the climate change

73. *Id.* at 259.

74. *Id.* at 269.

75. This draws upon the work of TAYLOR, *supra* note 28.

relationships.

The idea of private property consists of images, stories, and legends about what private property means. Who can forget, for example, “possession is nine-tenths of the law,” “finders, keepers—losers, weepers.” That is precisely the point—we *cannot* forget these idealized portrayals of private property, because

[f]rom the earliest moments of childhood, we feel the urge to assert ourselves through the language of possession against the real or imagined predations of others. ‘Property’ as an assertion of self and control of one’s environment provides human beings with a place of deep psychological refuge. With its concreteness and its unfailing assurances, property promises to protect us from change and from our fear that we will leave no evidence of our passage through this world.⁷⁶

All of this pushes us inexorably to one conclusion. The layperson understands private property as an individual and absolute entitlement (rights or choice) to a thing (car, house, factory, patent, etc.) which cannot be challenged by any other person, not even the state; indeed, to the contrary, if such a claim to entitlement is challenged, the state protects the individual. This idea remains deeply embedded in the human psyche,⁷⁷ associated with words like “mine,” “yours,” “castle,”⁷⁸ and “labour”/“desert.”⁷⁹ William Blackstone captured the idea of property quite well in his famous aphorism that property is “sole and despotic dominion,”⁸⁰ which we might summarize as Felix Cohen did:

[T]hat is property to which the following label can be attached:
To the world: Keep off X unless you have my permission,
which I may grant or withhold.
Signed: Private citizen
Endorsed: The state.⁸¹

Or, as Roberto Unger does:

[t]he right [choice] is a loaded gun that the rightholder [the

76. UNDERKUFFLER, *THE IDEA OF PROPERTY*, *supra* note 24, at 1 (footnotes omitted).

77. Joan Williams, *The Rhetoric of Property*, 83 IOWA L. REV. 277, 280–82 (1998); Bethany R. Berger, *What Owners Want and Governments Do: Evidence from the Oregon Experiment*, 78 FORDHAM L. REV. 1281, 1283, 1296 (2009); *see generally* Jonathan R. Nash & Stephanie M. Stern, *Property Frames*, 87 WASH. U. L. REV. 449; RADIN, *supra* note 29, at 123.

78. Singer, *The Ownership Society*, *supra* note 24, at 317.

79. *Id.* at 322.

80. BLACKSTONE, *supra* note 19, at 2.

81. Felix S. Cohen, *supra* note 20, at 374, 378–79.

holder of choice] may shoot at will in his corner of town. Outside that corner the other licensed gunmen may shoot him down. But the give-and-take of communal life and its characteristic concern for the actual effect of any decision upon the other person are incompatible with this view of right.⁸²

Notwithstanding anything that liberal property theorists might tell us, the person in the street who holds the choice conferred by the liberal concept of private property believes, understands, that they are a “gunman” in the sense that there exists a zone of essentially unfettered and absolute discretion to “an absolute claim to a divisible portion of social capital” and that “[i]n this zone the rightholder [can] avoid any tangle of claims to mutual responsibility.”⁸³ The individual holds an idea of private property that is quite at odds with the liberal conception advanced by contemporary property theorists. For the individual, private property provides and secures “a zone of unchecked discretionary action that others, whether private citizens or governmental officials, may not invade.”⁸⁴

So long as choice persists—and as long as liberalism underpins contemporary political, economic and social life, it will—then it matters *how* the *individual* understands what that choice *means*. So long as an individual, when faced directly with a clear and specific choice—car or not, green house or not, coal powered electricity or not—is free to think first of themselves without any regard for others, to act as the unchecked “gunman,” then the externalities of anthropogenic climate change will inevitably follow. And so long as individuals can act accordingly, the *idea* of property, rather than the abstract concept, is the real culprit behind the role played by private property in anthropogenic climate change. Regulation might control, and even prevent, *some* choices, but it cannot prevent all of them, unless, of course, society entirely removes property, or liberalism itself, which is unlikely to happen anytime soon.⁸⁵ As long as law protects the core, the zone, of absolute and unchecked discretion in the choices taken, the individual will act accordingly.

B. Why Does the Idea Matter?

The idea of private property matters for two reasons, both of which can be encapsulated by concepts drawn from public and international law

82. UNGER, *supra* note 40, at 36.

83. *Id.* at 37–38.

84. *Id.* at 38.

85. Even the most radical proposals for reform call for allowing liberalism to achieve its full potential rather than its replacement. *See, e.g.*, UNGER, *supra* note 40.

and modified for use in the private law context: sovereignty and colonialism. The idea informs the exercise of the “sovereignty” of private property over goods, resources, and others, which, in turn, makes “eco-colonialists” of individuals.

1. “Sovereignty”

As a public law concept, sovereignty describes the consequences of an independent state’s acquisition of territorial jurisdiction: the international independence of the state with supreme, absolute, and uncontrollable power over the acquired territory and the regulation of its internal affairs without accountability⁸⁶ to the international community.⁸⁷ In a radical departure from this orthodox view, however, in 1927 Morris Cohen appropriated sovereignty from the public law realm for use in the private to capture the essence of the power, control, and choice which private property confers on individuals.⁸⁸ Using a public law concept sharpens and makes more forcefully Felix Cohen’s point that the state endorses, through private property, individual freedom of choice in relation to goods and resources.⁸⁹ In its essence, private property is *really* a state delegation of *power* permitting the individual to do as one pleases with a particular good or resource.

And this state delegation of power forms a core component of what Duncan Kennedy calls legal ground rules giving permissions to cause injury to others,⁹⁰ which are “invisible” because:

we don’t think of [them] as ground rules at all, by contrast with ground rules of prohibition. This is Wesley Hohfeld’s insight: the legal order permits as well as prohibits, in the simple-minded sense that it *could* prohibit, but judges and legislators reject demands from those injured that the injurers be restrained.⁹¹

Thus,

when lawmakers do nothing, they appear to have nothing to do with the outcome. But when one thinks that many other forms of injury are prohibited, it becomes clear that inaction is a

86. BLACK’S LAW DICTIONARY (9th ed. 2009) (“sovereignty”); *see also* KENT MCNEIL, COMMON LAW ABORIGINAL TITLE 108–33 (1989). Perhaps the fullest and best depiction of the means by which sovereignty could be acquired over territory is found in *Mabo v. Queensland II* (1992) 175 C.L.R. 1.

87. *See* MCNEIL, *supra* note 86; *Mabo v. Queensland II* (1992) 175 C.L.R. 1.

88. Morris R. Cohen, *supra* note 24.

89. Felix S. Cohen, *supra*, note 20.

90. DUNCAN KENNEDY, SEXY DRESSING ETC. 90 (1993).

91. *Id.* at 90–91 (footnotes omitted).

policy, and that law is responsible for the outcome, at least in the abstract sense that the law “could have made it otherwise.”⁹²

Indeed,

[i]t is clear that lawmakers *could* require almost anything. When they require nothing, it looks as though the law is uninvolved in the situation, though the legal decision not to impose a duty is in another sense the cause of the outcome when one person is allowed to ignore another's plight.⁹³

While the state may act to prevent it, in every way that it does not so act, the state, through the sovereignty of private property delegated to one individual, confers the power to harm others, and to do it legally.

If we accept that the state *could* act, through moral imperatives, duties, and obligations imposed upon individuals to prevent the harm of anthropogenic climate change that it endorses through these grants of sovereignty, then all appears to be well. But appearances deceive. The problem is this: the liberal concept of private property we have seen, as with all western jurisprudence developed in a post-Westphalian world, is one in which arbitrary national boundaries were treated as more important than the human-caused phenomena that transcend those arbitrary lines on a map.⁹⁴ In fact, there was probably very little recognition that individuals could even produce trans-boundary consequences and, as such, so it was thought, the state could enforce both the holding of choice through private property and ensure the limitation of negative externalities because all of that would occur within territorial boundaries. William Twining explains that western legal concepts like private property developed in order to account for and explain “the municipal law of sovereign states, mainly those in advanced industrial societies.”⁹⁵ Indeed,

most of the leading Western jurists of the twentieth century have focused very largely on municipal state law, have had strong conceptions of sovereignty, and have assumed that legal systems and societies can be treated as discrete, largely self-contained units. They have either articulated or assumed that jurisprudence and the discipline of law is or should be concerned only with two kinds of law: the domestic municipal

92. *Id.* at 91.

93. *Id.* (emphasis in original, footnotes omitted).

94. See PARAG KHANNA, *THE SECOND WORLD: HOW EMERGING POWERS ARE REDEFINING GLOBAL COMPETITION IN THE TWENTY-FIRST CENTURY* (2009).

95. Twining, *Law, Justice and Rights*, *supra* note 42, at 4.

law of nation states and of public international law. . . .⁹⁶

The history of private property theorizing reveals no break in this pattern. As we have seen, however, climate change unmasks the falsity of the belief that whatever the holders of private property may do to others, it is contained by national jurisdictional boundaries.

Morris Cohen's use of "sovereignty," then, focuses our attention on the core insight to be drawn from the first proposition of this essay, that "we must not overlook the actual fact that dominion over things is also *imperium* over our fellow human beings."⁹⁷ Power, control, and choice are exercisable not merely over the good or resource, but also over others. And this results in a state-created, state-delegated, and state-enforced asymmetry between choice and consequence, for it is not one, or even a few, others who can be legally harmed; rather, anthropogenic climate change reveals, and is but one example of the fact that every decision taken has the potential to affect a great number of other people.⁹⁸

And what is more, the power to control and so affect the lives of many others is not limited to those within the jurisdiction that conferred the choice, nor is it limited to the current generation. This power over others is "supreme"⁹⁹ in the fullest sense of the word, for what is conferred by one state on one individual has the potential to allow for untold consequences for present and future generations of people outside the jurisdictional boundaries of the state that conferred the power. The state that confers the power to harm in fact has no authority to do so, for its consequences, its outcomes, its externalities are visited upon people over whom that state has no jurisdiction whatsoever, either physically or temporally. As we have seen, the externalities of climate change bear disproportionately, *asymmetrically*, on those of the developing world, now and in the future.

More troubling still, this sovereignty granted by one state cannot be limited by the very people who are subject to it—those who live beyond the legal jurisdictional and temporal borders of the state that delegated it. The concept of private property developed at a time when it was thought that the consequences of one's choices might be limited by private law actions—the tort of nuisance, for example—brought by a neighbor across the street or living in the next village, and typically, through the limitation of actions, in one's own generation. Yet, as we have seen, the externalities of climate change are felt by those on the next continent and

96. *Id.* at 7–8.

97. *Id.* at 13.

98. See Lametti, *supra* note 36.

99. Katz, *supra* note 33.

in times yet to come, rendering the countervailing power that one might have to choose one's own context, through political and adjudicative processes, meaningless. The citizens of Sudan, Bangladesh, or Tuvalu, let alone those who are not yet here, whose problems are in part the consequences of anthropogenic climate change, are powerless to choose the political-legal context that affects them. Rather, those in developed nations who hold the sovereignty conferred by private property choose the context of those living in the developed world and those yet to come for them. While the environmental context (the spatial-physical-temporal relationship) is global, the political-legal (the legal-social relationship) is divided into discrete units that lack the power to alter another's grant of sovereignty. Those who hold that power can continue to choose a context that suits their preferences and desires, even though doing so may cause harm to others. Yet there is more.

2. "Eco-Colonialism"

To explain fully why the idea of private property matters, we must appropriate a second concept drawn from public international law closely associated with sovereignty: colonialism. Historically, colonialism referred to the exploitation or subjugation of a people in a "peripheral society" or colony by a larger or wealthier state, the "metropolis," thus creating a set of unequal relationships between the two.¹⁰⁰ In acquiring territory as a colony, states relied upon colonialism in order to gain supreme, absolute, and uncontrollable power over a people thus changing the social, political, and economic structures within the colony.¹⁰¹ Jürgen Osterhammel summarizes the historical meaning of colonialism as:

a relationship of domination between an indigenous (or forcibly imported) majority and a minority of foreign invaders. The fundamental decisions affecting the lives of the colonized people are made and implemented by the colonial rulers in pursuit of interests that are often defined in a distant metropolis. Rejecting cultural compromises with the colonized population, the colonizers are convinced of their own superiority and of their ordained mandate to rule.¹⁰²

Historically, one metropole subordinated several peripheries, forming a colonial empire. Most overseas empires of the early modern

100. JÜRGEN OSTERHAMMEL, COLONIALISM: A THEORETICAL OVERVIEW 16–18 (Shelley L. Frisch trans., 2d ed. 2005) (1995).

101. Margaret Kohn, *Colonialism*, in STANFORD ENCYCLOPEDIA OF PHILOSOPHY (2006), available at <http://plato.stanford.edu/entries/colonialism/>; see also OSTERHAMMEL, *supra* note 100.

102. OSTERHAMMEL, *supra* note 100, at 16–17.

era were almost exclusively of this sort.¹⁰³ In the case of Britain and other empires of the nineteenth and twentieth centuries, the political and economic sphere of influence far exceeded their colonial core—“imperialism” describes these “transcolonial empires,” which “presupposes the will and the ability of an imperial center to *define* as imperial its own national interests and enforce them worldwide in the anarchy of the international system.”¹⁰⁴

In its historical sense, and in conjunction with sovereignty, a modified version of colonialism, which this essay calls “eco-colonialism,” explains why the idea of private property matters to the climate change relationship. Before explaining how, though, it is necessary to define the adapted use of colonialism. Some scholars within the climate change discourse use “eco-colonialism” to refer to “the process by which industrialised nations manipulate concerns about the environment in order to maintain their political, economic and ideological hegemony.”¹⁰⁵ This essay rejects this view as too narrow, instead taking a position that corresponds more fully to the historic meaning of “colonialism,” albeit modified in two important respects.

First, because the climate change relationship comprises a spatial-physical dimension, by “eco-colonialism” this essay means the way in which individuals in one nation, through the sovereignty conferred (without the authority to do so) by private property, exert supreme, absolute, and uncontrollable power over the citizens of other nations, creating a set of unequal, or asymmetrical, relationships that alter the social, political, and economic structures within those other nations. Second, we must not forget that the climate change relationship also comprises a temporal or intergenerational dimension. Thus, eco-colonialism involves the alteration of the social, political, and economic structures of other nations for *future generations*. This temporal dimension means that eco-colonialism includes “intergenerational-colonialism,” which adds another layer to the asymmetrical impact of sovereignty.

103. *Id.* at 18.

104. *Id.* at 21 (emphasis in original).

105. Michael Edwards, *Parochialism and Empowerment: Responding to Ecocolonialism and Globalisation in the Southwest Pacific*, in CLIMATE CHANGE IN THE SOUTH PACIFIC: IMPACTS AND RESPONSES IN AUSTRALIA, NEW ZEALAND, AND SMALL ISLAND STATES 258 n.19 (Alexander Gillespie & William C. G. Burns eds., 2000). Similar modifications have been made to “imperialism,” which has been adapted to “eco-imperialism,” or “ecological imperialism.” On imperialism, see OSTERHAMMEL, *supra* note 100, at 21–22. On eco-imperialism, see PAUL DRIESSEN, ECO-IMPERIALISM: GREEN POWER, BLACK DEATH (2003). On ecological imperialism, see ALFRED CROSBY, ECOLOGICAL IMPERIALISM: THE BIOLOGICAL EXPANSION OF EUROPE, 900–1900 (2d ed. 2004).

The question, then, is this: are all individuals who hold private property eco-colonialists? In short, yes. Even having accounted for the inherent state regulation of private property, we have seen that sovereignty remains such as to instantiate the climate change relationship between the holders of power, control, and choice and others—not only those living beyond the legal jurisdictional and territorial boundaries of the state which conferred the sovereignty, but also those of future generations. We have seen that those externalities—decreased stability and security, increased health risks, food shortages, and water stress—fall disproportionately (asymmetrically) on the poor and disadvantaged of the developing world and of future generations. Individuals in the developed world (a new metropole) use private property as a tool to affect the environment through climate change, subjugate, and exploit the citizens of developing nations, both now and in the future (a new periphery, or eco-colony). Just as nations once colonized peoples, usually through the direct use of military might, individuals now eco- and intergenerationally-colonize others indirectly through the control and use of goods and resources within their borders. And just as nations did in the past, this allows individuals today, through the use of the sovereignty over goods and resources, to create an unequal relationship between the developing and the developed worlds and so alter the social, political, and economic structures of the developing world both today and, more alarmingly, in the future.

There is a disjuncture here between the sovereignty of eco-colonialism, which posits supreme, absolute, and uncontrollable power, both territorially and temporally, and that conferred by private property, which the concept of liberal theory portrays as neither supreme nor absolute due to inherent limitation and control through the state power which conferred and recognizes it. The inherent limitation of private property supposedly limits the externalities that may follow from its exercise; and those subject to its consequences may supposedly choose the context in which they live through the political process. But we have seen that this conceptual outline fails to correspond to the idea of private property. Most, if not all, individuals tend to see private property in absolutist and individualist terms—they see it, in other words, as supreme, absolute, and uncontrollable—allowing for any and all uses of a good or resource that might suit personal preferences and desires. Of course, it matters little if that is what a person thinks they can do with a resource so long as the state will prevent that use when the time comes. But that comfort evaporates in the global and intergenerational contexts. While national sovereignty ends at arbitrary jurisdictional and immutable temporal borders, we have seen that the sovereignty of private property does not. Just as the territorial sovereignty of a state is seen to be uncontrollable and unaccountable within its territory, in the case of

anthropogenic climate change, the sovereignty of private property is truly uncontrollable and unaccountable, for there is no spatial or temporal sovereignty capable of limiting its externalities. The consequences of climate change transcend both national and temporal borders.

The analysis of sovereignty and colonialism presented here means that we are all eco-colonialists. An apt way to think about this comes from Neils M. Lund's 1904 painting "The Heart of the Empire," which depicts a scene of early twentieth century Imperial London, in which "Bank Junction [is shown] as the monumental, thronging hub of nineteenth-century imperial might."¹⁰⁶ The intersection becomes, "[t]hen, as now . . . a symbolic site of a Britain made great by its global reach."¹⁰⁷ Today, nations and states continue to wield global power (although no longer colonizing in quite the same way as they once did); yet, so too does the individual. Indeed it is the individual's power, based upon the sovereignty of private property, that is the more substantial, yet invisible, global power of our own time. The symbolic heart of the empire for nineteenth and twentieth century England, as represented in Lund's painting, was the political power (wielded by the state) and the financial power (wielded by banks). In the twenty-first century it is the liberal individual, exercising through private property a sovereignty having global reach, represented by the climate change relationship, building an "eco-colonial empire" that transcends national legal systems and their arbitrary physical and temporal boundaries.¹⁰⁸

IV. PROPOSITION THREE: THE IDEA *COULD* CHANGE

Assuming that we bear a moral imperative to act in the absence of a governmental response to anthropogenic climate change, is it even possible for the idea of private property to change? If it cannot, we lose the possibility to transform the way we live and the way we relate to others and the world around us. Tentatively, though, this section argues that it could be possible for the idea to change and concludes with some thoughts as to what that altered idea might look like.

A. How?

If the idea of private property is deeply ingrained in the human

106. JANE M. JACOBS, *EDGE OF EMPIRE: POSTCOLONIALISM AND THE CITY* 39 (1996).

107. *Id.* at 38.

108. See David Kennedy, *The Mystery of Global Governance*, in *RULING THE WORLD? CONSTITUTIONALISM, INTERNATIONAL LAW, AND GLOBAL GOVERNANCE* 37 (Jeffrey L. Dunoff & Joel P. Trachtman eds., 2009).

psyche, then even talking of its change may seem idealistic and, frankly, entirely impossible. Can one even conceive of a change in an idea that places at its core the freedom of the individual, with absolute rights to act in their self-interest in order to suit individual preferences, producing externalities without regard for their impact on others? It may seem impossible, but perhaps not. The answer lies in our own liberal history.

In *A Secular Age*,¹⁰⁹ Charles Taylor outlines the “social imaginary,”¹¹⁰ which encompasses and comprises

the ways in which [people] imagine their social existence, how they fit together with others, how things go on between them and their fellows, the expectations which are normally met, and the deeper normative notions and images which underlie these expectations.¹¹¹

Taylor explicitly uses “imaginary” in contrast to “social theory” for the latter, as its very name suggests, focuses on theory or concepts, and not on the way that ordinary people “imagine” their social surroundings in images, stories, legends, etc.¹¹² Moreover, theory is the province of a small minority (perhaps elite), rather than large groups of people, perhaps the whole of society.

The social imaginary, as Taylor defines it, emerges over time from a broader “moral order,” which, whatever it is for a given society, permeates one’s social existence and comes to constitute the common understanding making possible all of the collective practices of a society.¹¹³ Through this process of infiltration and transformation,

what is originally an idealization [theory] grows into a complex imaginary through being taken up and associated with social practices, in part traditional ones, but often transformed by the contact. This is crucial to what [Taylor] call[s] . . . the extension of the understanding of moral order. It couldn’t have become the dominant view in our culture without this penetration/transformation of our imaginary.¹¹⁴

And importantly, the social imaginary lags behind shifts in the moral order. As the latter changes, it becomes the dominant view in a given culture through penetration and transformation of the imaginary.

109. TAYLOR, *supra* note 28.

110. *Id.* at 171.

111. *Id.*

112. *Id.* at 171–72.

113. *Id.* at 171–76.

114. *Id.* at 175. This notion of idealization as starting with the theory of a small elite enjoys a long history in sociological thought. See CHARLES H. COOLEY, HUMAN NATURE AND THE SOCIAL ORDER 352–53 (1922).

This is particularly true of legal idealization or theory, which might “lead to change in mass consciousness [the social imaginary] . . . just maybe, in the very long run, through the complex processes by which elite ideas [idealizations/theories] interact with popular ideas in a mass culture.”¹¹⁵

Driven by idealizations, theories, or elite ideas, the moral order shifts first, followed by the imaginary, the popular idea.¹¹⁶ Taylor calls this the “long march,” which

is a process whereby new practices, or modifications of old ones, either developed through improvisation among certain groups and strata of the population . . . or else were launched by elites in such a way as to recruit a larger and larger base. . . . Or alternatively, a set of practices in the course of their slow development and ramification gradually changed their meaning for people, and hence helped to constitute a new social imaginary. . . . The result in all these cases was a profound transformation of the social imaginary in Western societies, and thus of the world in which we live.¹¹⁷

For Taylor, a “Grotian-Lockean” theory of moral order—which prioritizes the individual in terms of rights, provides both a political order to protect those rights and a society to secure them for the mutual benefit of all participants equally—first penetrated and transformed, and ultimately created our modern social imaginary. In other words, a theoretical idealization or elite idea of individualism transformed the modern social imaginary.¹¹⁸ This is important for our purposes because the social imaginary includes ideas about law, including those about the idea of private property as defined in Section IV of the essay. The question, then, is this: can a new moral order based upon the climate change relationship penetrate and transform the idea of private property in the same way that individualism transformed it in the past?

Again, Taylor offers guidance by identifying a few epochal moments in human history where such shifts have occurred—the most notable being “the great founding revolutions of our contemporary world, the American and the French.”¹¹⁹ In the former the transition was smooth and less catastrophic because the idealization of popular sovereignty was easy to connect with an existing practice of popular election. In the latter, however, the inability to translate the same idealization into a stable and agreed upon set of practices led to a great

115. DUNCAN KENNEDY, *A CRITIQUE OF ADJUDICATION*, *supra* note 40, at 274.

116. TAYLOR, *supra* note 28, at 175.

117. *Id.* at 176.

118. *Id.* at 170–71.

119. *Id.* at 175.

conflict that lasted for over a century. Still, Taylor argues that:

in both these great events, there was some awareness of the historical primacy of theory, which is central to the modern idea of a “revolution”, whereby we set out to remake our political life according to agreed principles. This “constructivism” has become a central feature of modern political culture.¹²⁰

And the lesson is that a shift in social imaginary occurs where:

people take up, improvise, or are inducted into new practices. These are made sense of by the new outlook, the one first articulated in [a] theory; this outlook is the context that gives sense to the practices. And hence the new understanding comes to be accessible to the participants in a way it wasn't before. It begins to define the contours of their world, and can eventually come to count as the taken-for-granted shape of things, too obvious to mention.¹²¹

Previous shifts of the moral order relied upon political and, in the case of both the American and the French revolutions, often violent, events. Altering the climate change relationship, however, may herald a non-violent and perhaps non-political “revolution;” itself the new moral order¹²² that moves us beyond not only the liberalism that dominated the last 400 years of human history, but also the concept and idea of private property. Almost forty years ago, Charles Reich wrote:

There is a revolution coming. It will not be like revolutions of the past. It will originate with the individual and with culture, and it will change the political structure only as its final act. It will not require violence to succeed, and it cannot be successfully resisted by violence. It is now spreading with amazing rapidity, and already our laws, institutions and social structure are changing in consequence. It promises a higher reason, a more human community, and a new and liberated individual. Its ultimate creation will be a new and enduring wholeness and beauty—a renewed relationship of man to

120. *Id.*

121. *Id.* at 175–76.

122. Hulme, *The True Meaning of Climate Change*, *supra* note 14; *see also* GORE, *EARTH IN THE BALANCE*, *supra* note 16; GORE, *AN INCONVENIENT TRUTH*, *supra* note 15; GORE, *OUR CHOICE*, *supra* note 16; NORTHCOTT, *supra* note 16; JAMES GUSTAVE SPETH, *THE BRIDGE AT THE EDGE OF THE WORLD: CAPITALISM, THE ENVIRONMENT, AND CROSSING FROM CRISIS TO SUSTAINABILITY* (2008); *ECOLOGY AND THE ENVIRONMENT*, *supra* note 46; FARIS, *supra* note 68.

himself, to other men, to society, to nature, and to the land.¹²³

Our own era may witness this peaceful revolution. Indeed, the failure of Copenhagen and of cap-and-trade schemes in various nations may themselves mark the coming of a new moral order, no matter how sluggish and painful that change may be. Far from being a threat, in climate change and the popular response to it,¹²⁴ we may find the source of this revolution, and in that, the shift in the social imaginary and the idea of private property. It turns out that this is not so outlandish after all. In those epochal moments in our own human history, events that no one foresaw, that allowed the theory of liberalism to become the social imaginary of contemporary society, one finds not doom but hope. Itself the source of the problem that brought us to this ecological tipping point, our own liberal history provides “[t]he greatest encouragement we have in starting that process . . . that it is more like than unlike other great changes we have managed, and that the same tradition of freedom that drove those changes has resources for this one.”¹²⁵

B. What Would It Look Like?

Assuming that such a change is possible, what would the new idea of private property look like? The answer is rather straightforward. Just as the modern idea of private property focuses on the rights and personal preference-satisfaction of the liberal concept, an idea of property more finely attuned to the climate change relationship would adopt the relational dimension of the liberal concept. In other words, a model for a renewed idea suited to the contemporary world already exists: the *concept* of private property itself, as outlined in Section IIA.¹²⁶

Some might see such a shift as a sacrifice of what we already have—liberty and unfettered choice hard-won over a long period of human history. Jedediah Purdy suggests, though, that such a view of liberalism treats freedom merely as self-indulgence, and paints a shallow picture, indeed, of our own human history.¹²⁷ Purdy argues that, in fact, the concept of freedom emerged over time (most notably in America) from attempts to imagine and create a society of equals making possible

123. CHARLES A. REICH, *THE GREENING OF AMERICA* 11 (1970).

124. See GALLUP, *supra* note 13.

125. PURDY, *A TOLERABLE ANARCHY*, *supra* note 49, at 228.

126. See Nash & Stern, *supra* note 77; Berger, *supra* note 77. In both sources, the authors argue that the concept of property has not penetrated the public or common consciousness.

127. PURDY, *A TOLERABLE ANARCHY*, *supra* note 49, at 221–22.

a request for sacrifice.¹²⁸ In other words, it is possible to see freedom differently, and climate change demands doing so. We must re-imagine the very nature of freedom as being susceptible to limitation by regulation aimed at enriching it by respecting the dignity and autonomy of others.¹²⁹ Such an idea of private property requires nothing less than “a complete acknowledgment and accounting of the effects of our actions [choices], and, in that respect, an economy that does not require its participants to look away from what they do.”¹³⁰

Three advantages might follow if the concept of private property were to penetrate the popular psyche and become an idea forming part of the social imaginary. First, because the concept more accurately reflects the legal reality of private property, as comprising a social-legal relationship, the popular idea would also seek to identify and respond to the relationships that are produced by the choice conferred by those rights, such as the climate change relationship. Second, regulation (or concern for others), currently something popularly thought to be external to private property and an imposition on the owner, would be seen as it is—internal to and part of the concept of property, the responsibility of both the state and the individual.

Above all, such a model for the idea of private property preserves intact the notion that choice lies at the heart of property. This model in no way rejects choice as being central to private property or the individual as being the primary actor in the social-legal relationship that instantiates it. On the contrary, it merely conceives choice and the individual differently—as socially- and community-situated rather than atomistic. This model gives full recognition to the simple truth that no choice is made in a vacuum. And while some property theorists already argue for just such a change, they do so at the level of concept and not idea.¹³¹ This essay argues that a deeper change is possible—one at the psychological level of the individual making the choice, whatever it is.

V. CONCLUSION: WHAT WE DO *MATTERS*

In a recent editorial, George F. Will,¹³² citing an essay written by

128. *Id.* at 222–24.

129. *Id.* at 224–25.

130. *Id.* at 227.

131. See, e.g., RADIN, *supra* note 29, at 120–45; William H. Simon, *Social-Republican Property*, 38 UCLA L. REV. 1335 (1991); Singer, *The Ownership Society*, *supra* note 24.

132. Will, *supra* note 21.

Robert B. Laughlin,¹³³ proclaims that the Earth does not care about what is done to or for it,¹³⁴ arguing that “[w]hat humans do to, and ostensibly for, the earth does not matter in the long run, and the long run is what matters to the earth. We must . . . think about the earth’s past in terms of geologic time.”¹³⁵ To put it simply, what is going to happen to the earth and its atmosphere will happen whether humans act or not. Moreover, in his essay, Laughlin writes, “[o]n the scales of time relevant to itself, the earth doesn’t care about any of these governments or their legislation.”¹³⁶ Will concludes: “[b]uy a hybrid, turn off your air conditioner, unplug your refrigerator, yank your phone charger from the wall socket—such actions will “leave the end result exactly the same.”¹³⁷ Will and Laughlin’s argument provides a useful counterpoint for two conclusions.

First, while it may be true that what we do to or for the earth will do little *for the earth*, the same is not true for how our actions will affect humans. The sovereignty conferred by private property, through the climate change relationship, allows us to use the earth as a tool for the asymmetrical exercise of power, control, and choice over every other person on the planet (including, paradoxically, ourselves). Private property, based upon an absolutist and individualist idea, allows individuals to use the earth and its natural greenhouse effect, to eco-colonize others, both now and in the future.

This is not a gloomy eco-anarchism or eco-authoritarianism,¹³⁸ but a recognition of the tough reality that many of our private law concepts were developed in the age of nation states, a time when private property, contract, etc., were seen as background concepts that mediated relationships between people within defined and discrete legal jurisdictional borders. But such concepts, and the ideas which underpin them, no longer work in the era of globalization. Private property is the paradigm example of this truth. More importantly, it forces us to face the tough reality that it *does* matter what we do to or for the earth; perhaps not for what it *will mean* for the earth, but for what it *means*, now and in the future, for others.

Second, Will and Laughlin are partly right about governments and their legislation, but, rather than the earth not caring about what is done from a legal perspective, the real insight here is this: we need not wait for governments to act. We have already seen that governments are

133. Robert B. Laughlin, *What the Earth Knows*, THE AMERICAN SCHOLAR, Summer 2010, available at <http://www.theamericanscholar.org/what-the-earth-knows/>.

134. Will, *supra* note 21 (citing Laughlin, *supra* note 133).

135. *Id.*

136. Laughlin, *supra* note 133.

137. Will, *supra* note 21 (citing Laughlin, *supra* note 133).

138. HULME, WHY WE DISAGREE, *supra* note 14, at 309.

expressing a reticence about taking the sort of action that might be necessary to respond to anthropogenic climate change. Individuals, however, can act now, without the need to wait for governments and legislation, be it cap-and-trade, carbon tax, or some other remedy. The hidden reality of the sovereignty conferred by private property is that it is just that—sovereignty. We can just as easily choose to exercise that power so as to produce the GHG emissions that drive the climate change relationship, or we can choose not to so act. We need not wait for governments to either allow us to do that or instruct us to do so. And in taking action, we will change the idea of private property and “see how we can use the idea of climate change—the matrix of ecological functions, power relationships, cultural discourses and material flows that climate change reveals—to rethink how we take forward our political, social, economic and personal projects over the decades to come.”¹³⁹ In short, we have the sovereignty to make those choices now, and we always have, in our idea of private property.

139. *Id.* at 362.

Lectures

A Report on Professor Edward Ziegler's Lecture—The Future American Landscape: Urban Planning Law Reform and Sustainable Development

Caroline Baker*

On Wednesday, April sixth, Professor Edward Ziegler presented a lecture entitled *The Future American Landscape: Urban Planning Law Reform and Sustainable Development in the 21st Century* as part of the annual Colorado Journal of International Environmental Law and Policy lecture series. Professor Ziegler currently teaches at the University of Denver Sturm College of Law, has written extensively on the topic of zoning and urban planning, and has consulted on a variety of urban planning projects around the world, including working with the cities of Paris and Shanghai, and a myriad of other groups and governments internationally. He is a European Union Visiting Erasmus Scholar and has presented lectures at the University of Trento, the University of Barcelona, the Pantheon-Sorbonne University of Paris and the European Institute for Federal and Regional Studies in Blozano Italy.

The focus of Professor Ziegler's lecture at Colorado Law was the future of urban planning in the United States, specifically in the western states. The United States is, and has been, a commuter culture, where the dream of two cars in every garage is still alive and well. This means the average American is less likely, and less inclined, to seek out public transportation options, favoring instead the "freedom" of his individual automobile. Adding to this penchant for driving is an ingrained sense of

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distrust of public transportation stemming from concerns ranging from those about public safety to unreliability. Furthermore, as American cities continue to expand outwards in a rather haphazard fashion, they outpace the development of both sufficient infrastructure to handle the ever-expanding population as well as the ability to implement effective public transportation systems. This has resulted in a present-day reality where the average American spends about thirty-four hours a year sitting in traffic, the nation is overly dependent on a unsustainable fuel source, and highways across the country are overloaded as populations explode and infrastructure implodes.

Further contributing to the continued sprawling of U.S. development is the great American migration away from cities and into single-family developments in the suburbs. This pattern not only burdens the nation's already over-taxed infrastructure but also exacerbates the environmentally unsustainable trajectory of development in the United States. The increasing number of families living in detached homes means an increase in fuel usage for heating and cooling purposes as well as an increase in emissions from those same activities and many more cars on the road. The "forty acres and a mule" ideal has led to an unsustainable reality.

Professor Ziegler demonstrated how the development of European cities, mirrored against the current situation in the United States, has contributed to their being both environmentally and developmentally sustainable despite having experienced huge rates of growth. European cities have tended to develop concentrically, radiating out from the city centers, and enabling public transportation systems to effectively serve the growing population. Furthermore, the culture of public transportation, meaning the public utilization of public transport options, has traditionally been far more successful in Europe than in the United States. Additionally, cities continue to be the primary population centers, meaning most Europeans still live in multi-family buildings, lessening average fuel consumption and increasing environmental sustainability. In fact, large cities, with vertical and not horizontal construction, continue to be the most environmentally friendly population centers in the world, with Hong Kong leading the field.

That does not mean that the idea of the single-family home has been abandoned. In China, new planned developments are being constructed with the aim of providing single-family community living outside of major metropolitan centers. However, what makes these developments more sustainable than their American counterparts, off of which they are mirrored, is their much higher population densities; their inclusion of retail, office, and housing space; the self-sustaining nature of each development; and finite parking space availability. Only one car per household is allowed. The car is parked in a communal lot on the

outskirts of the community and may not be driven within town. Furthermore, each planned community is connected to the major public transportation networks in the region with train terminals and bus stops in the center of town. Thus, these communities are able to operate in a far more sustainable manner—allowing residents to find all their basic necessities within their own development whilst still being connected to the larger metropolitan area without necessitating owning or driving a car.

Unplanned and uncontained urban sprawl in the United States affects not just the environment and infrastructure; it also affects the economy, national security, and public health. As American workers continue to waste time sitting in traffic, overall productivity suffers, as does overall health. Furthermore, the nation's continued dependence on foreign fuel sources, which is heightened by the continued growth of suburban areas and dependence on automobiles, makes the United States less secure and more vulnerable to the effects of foreign wars and economic troubles. The future of American cities is uncertain, but a little planning could go a long way towards a more sustainable and environmentally friendly future.

A Report on Ambassador Clayton Yeutter's Lecture—Climate Change, Agriculture, and International Trade: Challenges and Opportunities

Jaimie N. Cavanaugh*

On April 11, 2011, the students of the University of Colorado Law School welcomed Ambassador Clayton Yeutter for a lecture co-sponsored by the Colorado Journal of International Environmental Law and Policy. Ambassador Yeutter's resumé is extensive. He served in the cabinet or sub-cabinet to four separate presidents. He served as the U.S. Trade Representative and helped to facilitate the Uruguay Round of negotiations, which led to the formation of the World Trade Organization. He then served as the United States Secretary of Agriculture. Ambassador Yeutter has also worked as the Assistant Secretary of Agriculture, Deputy Special Trade Representative, and was Chief of Staff to a former Governor of Nebraska. Today, Ambassador Yeutter is Of Counsel to Hogan Lovells in Washington, D.C., as well as the director of several corporations involved in international commerce and international finance. With his expertise in negotiations and international trade, Ambassador Yeutter brought with him a different perspective on solutions and responses to the many consequences of global climate change.

Despite his wealth of knowledge and experience, Ambassador Yeutter's tone was relaxed, friendly and conversational. Before he began speaking about solutions to the consequences of climate change, Ambassador Yeutter framed the issue by asking, "Is climate change a legitimate issue? Should we even be concerned?" These questions are important because they serve as a reminder that the issue of climate change remains politically unsettled. Therefore, before discussions can

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begin about solutions to the problem, everyone involved needs to agree that a problem actually exists. Yeutter spoke candidly in saying that it is clear that the American public is not convinced that climate change is a threatening problem, or, at least, they are not convinced that they should be doing anything about it yet.

To give an example of the contention surrounding climate science, Ambassador Yeutter mentioned a conversation he had with the Dean of Agriculture at the University of Wisconsin. He described how the Dean believed states like Wisconsin could potentially benefit from climate change, as it would lead to longer growing seasons and higher crop yields. Ambassador Yeutter also reminded the audience of how complex the consequences associated with climate change actually are. What about the increased possibility of droughts for instance? How would that contribute to changes in crop yields? The actual consequences of climate change remain uncertain and are predicted to be vastly different in different places. All of these uncertainties help explain why climate change remains politically unsettled.

Ambassador Yeutter then continued by asking, regardless of the debates surrounding the projected consequences of climate change, whether there is something that the world ought to be doing now. The theory justifying preemptive action of this sort, even in the absence of indisputable scientific data, is commonly referred to as the Precautionary Principle. This principle can be applied very broadly to different subjects, such as law and economics, but more recently it has been applied to environmental policy issues.¹ More specifically, the Precautionary Principle calls for protective action to be taken in the absence of certain scientific data out of concern for the health and safety of present and future generations.² Ambassador Yeutter also mentioned the American Clean Energy and Security Act, which was passed by the U.S. House of Representatives in 2009 to address climate change.³ The Bill died in the Senate, which again illustrates the ongoing debate surrounding the creation of legally enforceable climate change policies.

Despite the lack of a national U.S. policy on climate change, Ambassador Yeutter made it clear that he believes the United States is actually in substantially the same position as the rest of the world. He went on to say that he does not think anything worthwhile is being

1. See INTERPRETING THE PRECAUTIONARY PRINCIPLE (JAMES CAMERON & TIMOTHY O'RIORDAN EDS., SEPT. 1994), available at <http://www.Agobservatory.org/library.cfm?refID=30236> (last visited May 30, 2011).

2. *Id.*

3. H.B. 2454, 111th Cong. (2009).

accomplished at a global level. Despite the publicity and excitement surrounding the United Nations Framework Convention on Climate Change (“UNFCCC”), Ambassador Yeutter believes that the meetings between the UNFCCC parties are too cumbersome and inefficient to produce real results. He also suggested that while many other countries appear much more invested and engaged in climate change discussions and negotiations, many of the policies created by these countries are just for show and are not actually useful for preventing or reducing the predicted effects of climate change.

Ambassador Yeutter referred anecdotally to a discussion he once had with a European Environmental Minister. It was 1992, at the Rio Earth Summit, and this specific Minister made it clear that many European countries were very eager to sign up for specific greenhouse gas reduction targets and timetables, yet they also admitted openly that their goals were unrealistic. Therefore, despite the fact that this Environmental Minister and many others were attending the Rio Summit and eagerly committing to reducing greenhouse gas emissions, they already may have known they would not be able to meet any of these commitments.

Ambassador Yeutter continued by outlining some possible solutions to the problems with inefficiencies in environmental negotiations. His first suggestion was to have environmental negotiators mimic the practices of international trade negotiators. Based on his experience in the world of global commerce, Ambassador Yeutter believes trade negotiators are more efficient at working through tough issues to reach mutually beneficial international agreements. Second, he called for a reduction in the number of parties in attendance at international environmental policy negotiations. Although climate change is recognized as a global problem, Ambassador Yeutter pointed out the inefficiency of inviting over a hundred countries to these meetings. For example, it can take days for real negotiations to begin at these conferences because of the time taken by each country in making opening remarks.

To illustrate his point, Ambassador Yeutter discussed the Trans-Pacific Partnership,⁴ which he believes to be the best and most efficient example of current international negotiations. The partnership consists of nine countries that work together to negotiate the limitations on trade barriers in the Asian Pacific region. The Partnership is continuing to grow, but Ambassador Yeutter appeared confident about the Partnership’s ability to continue to negotiate favorable outcomes for all

4. *Trans-Pacific Partnership*, OFFICE OF THE U.S. TRADE REP., <http://www.ustr.gov/tpp> (last visited May 30, 2011).

parties involved.

In relation to climate change, Ambassador Yeutter made it clear that a combination of sticks and carrots, or regulations and incentives, would be necessary to achieve effective climate change policies. Necessary regulations may include penalizing sources that emit greenhouse gases through various measures such as taxes, while necessary incentives may include giving real trade benefits to producers of certified green products and services. These trade benefits could be structured to work domestically or internationally.

While Ambassador Yeutter engaged students by suggesting a different approach to international environmental negotiations, his ideas still need to be expanded upon. In the end, listeners had to decide for themselves which approach they find more effective. Is it better to go ahead and sign agreements and create greenhouse gas reductions goals just to begin moving in the right direction, even if the goals are unattainable? Or would it be better to wait to legislate until there is a national consensus that climate change is a problem and a smaller group of negotiating countries that has formed a realistic, coordinated, international solution?

In his closing, Ambassador Yeutter left the audience with some general advice, explaining that the most important skills for all professions are the abilities to read, write, and speak well. He also emphasized the importance of succinctness in writing and speaking. His earlier call for more streamlined and efficient negotiations tied into this final reminder: in every situation, the most effective communicators are able to move directly to the heart of a matter and summarize their opinions briefly and comprehensively.

Overall, the differences between climate change and international commerce remain distinct. Skeptics of Ambassador Yeutter's position could argue that because climate change will effect the whole world, inviting only seven or eight countries to international climate change policy discussions would not be worthwhile or fair. It is true that in the absence of any global consensus on the consequences of climate change or enforceable international laws, greenhouse gas emissions cannot be eliminated; however, there is always the possibility that they can be reduced.

Ambassador Yeutter's point that the United States and other powerful world leaders could show the rest of the world exactly what can be accomplished through legislation is an important one. At the very least, legislating and thereby placing restrictions or penalties on greenhouse gas emissions, would show the rest of the world that the United States is taking the threat of climate change seriously and acting in a precautionary manner to ensure the safety and well-being of current

and future generations. And if the United States really were able to give trade benefits to imports of certified “eco-friendly” products, more countries might begin to take the threat of climate change seriously. Under such a system, many corporations would likely choose to make more environmentally friendly choices when manufacturing products to be shipped into the United States.

Legislation addressing climate change could also be technology forcing, meaning it could encourage the private sector to come up with more innovative and affordable ways to decrease greenhouse gas emissions. While these would all be very positive steps for the United States, no perfect solution exists to minimize the consequences of climate change. And no matter how far the United States, or any country, goes on its own, global solutions cannot exist until the world’s biggest greenhouse gas emitters find a way to work together to reduce global greenhouse gas emissions.

Expanding Environmental Justice after War: The Need for Universal Jurisdiction over Environmental War Crimes

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I. INTRODUCTION

There is no such thing as an environmentally friendly war. The simplest act of a modern soldier, shooting a rifle, will cause some environmental degradation because the heavy metal in the bullet will pollute the earth wherever it lands.¹ Criminalizing all wartime environmental destruction is as feasible as criminalizing all wartime homicide—destruction is the point of war. However, the Rome Statute, creating the International Criminal Court (“ICC”), provides the natural environment criminal protection from those who “[i]ntentionally launch an attack [with] the knowledge that such attack will cause . . . widespread, long-term, and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated.”² While this provision can punish attacks on the natural environment, the ICC has not prosecuted anyone using it, and future prosecution under the statute is unlikely because the law is untested and its critical terms are ambiguous.³ An ICC prosecutor probably would rather charge an alleged war criminal with a more traditional war crime instead because an environmental war crime charge will require litigation regarding all the minutiae surrounding Article 8(2)(b)(iv), whereas more traditional war crimes have a larger body of precedent because national and international courts have interpreted them. The novelty of Article 8(2)(b)(iv) means there is little in the body of international law to guide courts, resulting in its non-use. To develop environmental war crime law to a point where the ICC could successfully prosecute under Article 8(2)(b)(iv), states should exercise universal jurisdiction over environmental war crimes.

Universal jurisdiction developed because states realized, as they developed rules and customs in international law, that certain criminal offenses are objectionable to such a degree that prosecutions should not be thwarted based on jurisdictional loopholes. Indeed, piracy gave birth to universal jurisdiction when Cicero proclaimed that pirates terrorizing Mediterranean shipping were *hostis humani generis*—enemies of humankind.⁴ Lord Blackstone later described the duty of every nation to

1. See Xinde Cao, et al., *Weathering of Lead Bullets and Their Environmental Effects at Outdoor Shooting Ranges*, 32 J. ENVTL. QUALITY 526 (2003).

2. Rome Statute of the International Criminal Court, July 12, 1999, U.N. Doc. A/CONF.183/9, art. 8(2)(b)(iv) [hereinafter Rome Statute].

3. Jessica C. Lawrence & Kevin Jon Heller, *The First Ecocentric Environmental War Crime: The Limits of Article 8(2)(B)(IV) of the Rome Statute*, 20 GEO. INT'L ENVTL. L. REV. 61, 94–95 (2007).

4. Joseph McMillan, *Apocalyptic Terrorism: The Case for Preventive Action*, 212 STRATEGIC FORUM 2 (2004).

combat piracy as a collective duty to defeat the enemies of humankind.⁵ Pirates, as enemies of humankind, essentially lost any jurisdictional protection by virtue of their crimes, and courts tried any pirate found on the high seas.⁶ Later, by successfully labeling slave traders *hostis humani generis* and employing the Royal Navy for enforcement, the British Empire helped expand universal jurisdiction over slave traders.⁷

The international community applied universal jurisdiction over war crimes and crimes against humanity committed during World War II, extending universal jurisdiction to punish the horrific crimes of the Axis countries.⁸ Today, torture⁹ is broadly understood to be subject to universal jurisdiction because torturers are considered *hostis humani generis* like pirates and slave traders.¹⁰ Some even argue that “enemy combatants” in the Global War on Terror are also *hostis humani generis* subject to universal jurisdiction.¹¹ The Rome Statute acknowledges the principles of universal jurisdiction by describing its jurisdiction over “persons for the most serious crimes of international concern” as “complementary to national criminal jurisdictions.”¹²

Although not currently subject to universal jurisdiction, attacks against the natural environment are prohibited by the Rome Statute, the First Protocol to the Geneva Conventions (“Protocol I”), and the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques (“ENMOD”).¹³ The latter two

5. *Id.*; 4 WILLIAM BLACKSTONE, COMMENTARIES 72.

6. Edwin D. Dickinson, *Is the Crime of Piracy Obsolete?*, 38 HARV. L. REV. 334, 338 (1925).

7. Kenneth C. Randall, *Universal Jurisdiction Under International Law*, 66 TEX. L. REV. 785, 798–99 (1988).

8. *See id.* at 800.

9. The scope of this note does not encompass the debate about what conduct rises to the level of torture, because such discussion is unnecessary. No one, not even John Yoo, seriously debates the existence of conduct that could be defined as torture, and that conduct is addressed by the United Nations Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, G.A. Res. 39/46, U.N. Doc A/RES/39/46 (Dec. 10, 1984) [hereinafter Torture Convention].

10. *Filartiga v. Peña-Irala*, 630 F.2d 876, 890 (2d Cir. 1980). *But see* Eugene Kontorovich, *The Piracy Analogy: Modern Universal Jurisdiction’s Hollow Foundation*, 45 HARV. INT’L L. J. 183, 236. Kontorovich argues that the development of universal jurisdiction beyond piracy rests on the faulty assumption that heinousness can justify universal jurisdiction. His critique and the other revisionist critiques of universal jurisdiction are interesting but are not covered in depth because they are outside the scope of this note.

11. McMillan, *supra* note 4.

12. Rome Statute, *supra* note 2, art. 1.

13. Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts, Dec. 12, 1977,

treaties have no independent international enforcement mechanism though, and the ICC is paralyzed in the matter because there is no guidance from precedent on how to prosecute an attack on the non-natural environment.¹⁴ Although these two treaties provide unprecedented wartime environmental protection, the victory is only moral; an un-enforced law has the same actual effect as no law at all. This note argues that states should adopt statutes extending universal jurisdiction over attacks against the natural environment to cure this prosecutorial paralysis in the short term using national courts, which will create the necessary precedent in environmental war crime law that international courts will rely on in the long run. National courts should extend universal jurisdiction over attacks on the natural environment because such attacks are *hostis humani generis*, and extension of universal jurisdiction over them is therefore just.

II. THE EVOLUTION OF LIABILITY FOR ENVIRONMENTAL WAR CRIMES

The term "environmental war crimes" can encompass both attacks against the human environment and the natural environment. The Nuremberg Charter contemplates attacks on the human environment with its "wanton destruction of cities, towns, and villages"¹⁵ requirement, whereas Protocol I and ENMOD proscribe, albeit with no international criminal remedy, certain attacks on the natural environment.¹⁶ When the Rome Statute was ratified, newly implemented Article 8(2)(b)(iv) created the first "eco-centric" war crime by extending ICC jurisdiction over certain attacks on the environment using language similar to that contained in Protocol I and ENMOD.¹⁷ However, the prospects of prosecuting an "eco-centric" war crime at the ICC are grim due to (1) substantial ambiguity as to Article 8(2)(b)(iv)'s key terms, (2) a very stringent *mens rea*, and (3) ICC institutional limitations.¹⁸

1125 U.N.T.S. 3 [hereinafter Protocol I]; Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, G.A. Res. 31/72, U.N. Doc. A/RES/31/72 (May 18, 1977) [hereinafter ENMOD].

14. Lawrence & Heller, *supra* note 3, at 95.

15. Charter of the International Military Tribunal, in Agreement for the Prosecution and Punishment of the Major War Criminals of the European Axis, art. 6(b) Aug. 8, 1945, 82 U.N.T.S. 279 [hereinafter Nuremberg Charter].

16. Lawrence & Heller, *supra* note 3, at 67.

17. *Id.* at 70-71.

18. *Id.* at 94-95.

A. Environmental War Crimes before the Rome Statute

Environmental war crime history is probably as lengthy as the history of war itself, although the history of liability for such crimes is nascent. Reports of salting the soil of a conquered city exist in the Old Testament,¹⁹ and the tale of Scipio salting Carthage's soil lives on.²⁰ Environmental war crimes range from the Iraqi torching and dumping of Kuwaiti oil, to Sherman's March to the Sea, to American defoliant operations in Vietnam.²¹ Despite their long history, actual instances of environmental war crime prosecution are sparse. The International Military Tribunal sitting at Nuremberg ("IMT"), and a lesser American tribunal operating under the Nuremberg Charter, were the first tribunals to levy environmental war crime prosecutions against the German officers Alfred Jödl and Lothar Rendulic.²²

The Nuremberg Charter extended the jurisdiction of the IMT and the lesser post-war tribunals over the "wanton destruction of cities, towns or villages, or devastation not justified by military necessity."²³ While the Nuremberg Charter did not extend jurisdiction over crimes against the environment independent of human effects, the above jurisdictional grant over scorched earth tactics was used to charge both Jödl and Rendulic.²⁴ Both men were accused of using scorched earth tactics during withdrawals from Norway and Russia. An American military tribunal acquitted Rendulic on scorched earth charges because it found Rendulic mistakenly believed that destroying vast tracts of Northern Norway was necessary to retreat from Soviet forces.²⁵ However, Alfred Jödl was convicted of war crimes by the IMT for destroying vast tracts of both Norway and Russia while retreating from the Red Army as well.²⁶ It appears the difference in outcome turns upon the fact that Jödl presented only a "superior orders" defense, a defense that was explicitly prohibited by Article Eight of the Nuremberg Charter.²⁷ If Jödl had presented a

19. *Judges* 9:45.

20. Mark A. Drumbl, *Waging War Against the World: The Need to Move From War Crimes to Environmental Crimes*, 22 *FORDHAM INT'L L. J.* 122, 123 (1998).

21. *Id.*

22. Carl E. Bruch, *All's Not Fair in (Civil) War: Criminal Liability for Environmental Damage in Internal Armed Conflict*, 25 *VT. L. REV.* 695, 716 (2001).

23. Nuremberg Charter, *supra* note 15.

24. *The Hostages Trial*, 8 *LAW REP. TRIALS WAR CRIMINALS* 34, 69 (1948) [hereinafter *Rendulic Trial*]; *The Trial of German Major War Criminals*, 22 *PROCEEDINGS OF THE INTERNATIONAL MILITARY TRIBUNAL SITTING AT NUREMBERG, GERMANY* 517 (1950) [hereinafter *Jödl Trial*].

25. *Rendulic Trial*, *supra* note 24.

26. *Jödl Trial*, *supra* note 24.

27. *Id.*

military necessity defense he might have been acquitted of the scorched earth charges, although it would have had no impact on his conviction for planning the illegal invasions of Norway, Yugoslavia, Greece, Albania, and Russia.²⁸

While the IMT made the first successful international prosecution for an environmental war crime, the precedent created an extremely narrow scope of conduct actually punishable as an environmental war crime. The requirement of "wanton destruction of cities, towns, and villages"²⁹ fails to protect unpopulated areas and focuses upon the physical structures of habitation rather than the natural world that surrounds it. Although the IMT at Nuremburg acknowledged international criminal liability for environmental destruction during wartime, the court's precedent did not create substantial criminal liability for attacks against the natural environment because such attacks were outside the scope of the IMT's jurisdiction.³⁰

Protocol I and ENMOD contain provisions to protect the environment during wartime, but those agreements do not authorize international criminal sanctions against those responsible; states are required to ensure they live up to these obligations, but there is no international individual criminal penalty for not doing so.³¹ The UN Security Council even considered the difficulty of criminally prosecuting Iraqis as environmental war criminals when it established a compensation commission instead of establishing criminal tribunals to punish the officers responsible for the environmental catastrophe that occurred during the Arabian Gulf armed conflict from 1990 to 1991.³² Even when *ad hoc* international criminal tribunals are authorized, they have not indicted anyone for an environmental war crime despite the authorization to do so.³³ The precedent set at Nuremburg that allows mistaken belief as to military necessity to negate the *mens rea* of an environmental war crime modeled on Nuremberg Charter Article 6(b), hinders any effort by a tribunal to prosecute environmental war

28. *Id.* at 516.

29. Nuremburg Charter, *supra* note 15.

30. Aurelie Lopez, *Criminal Liability for Environmental Damage Occurring in Time of Non-International Armed Conflict: Rights and Remedies*, 18 FORDHAM ENVTL. L. REV. 231, 247-48 (2007).

31. Lawrence & Heller, *supra* note 3, at 67.

32. See generally Meshari K. Eifan, Head of State Criminal Responsibility for Environmental War Crimes: Case Study: The Arabian Gulf Armed Conflict 1990-1991 (2007) (unpublished J.S.D. dissertation) (although Iraq created a special tribunal to address the crimes of the Hussein regime and its authorizing statute has an article very similar to the Rome Statute's 8(2)(b)(iv), the statute has not been used).

33. Drumbl, *supra* note 20, at 145-46.

criminals, especially when easier-to-prove war crimes are typically available to prosecutors.³⁴ There is little incentive to undertake a precedent-setting environmental war crime prosecution when there are much easier paths to achieve the goal of retributive justice.

B. Environmental War Crimes after the Rome Statute:

Article 8(2)(b)(iv)

Article 8(2)(b)(iv) revolutionized the prosecution of environmental war crimes. The scorched earth charges at Nuremburg focused on injury to a human victim, as did the other treaties authorizing criminal remedies for environmental war crimes.³⁵ Other international agreements that offered greater protection to the environment limited the scope of remedies to state reparations.³⁶ Unlike previous anthropocentric laws, the “Article does not condition individual criminal responsibility on damage to the environment also causing injury to human beings.”³⁷ Because of this, Article 8(2)(b)(iv) is the first “eco-centric” crime recognized by the international community, and it vastly expanded the scope of environmental offenses that could result in criminal liability.³⁸ Despite the expanded scope of environmental offenses, no one has been prosecuted under Article 8(2)(b)(iv), and the feasibility of such prosecution is highly doubtful.³⁹ Although the ICC now has jurisdiction over attacks against the environment, no charges under Article 8(2)(b)(iv) have been filed. It could be that the time is not right for a prosecution, but more likely, the Article’s own drawbacks combined with the ICC’s limited jurisdiction makes prosecution under Article 8(2)(b)(iv) too difficult to secure convictions.

Article 8(2)(b)(iv) requires “widespread, long-term, and severe” damage to the natural environment,” yet the three modifiers of “damage” and the term “natural environment” are not defined in the Rome Statute.⁴⁰ Any indictment under Article 8(2)(b)(iv) would face hurdles based on Article 22(2)’s requirement that ambiguity, as to definitions, will be construed in favor of the charged person.⁴¹ Unless the Rome Statute is modified to define these terms, the ICC will probably look to

34. See Drumbl, *supra* note 20.

35. Lawrence & Heller, *supra* note 3, at 64–67.

36. *Id.*

37. *Id.* at 71.

38. *Id.*

39. *Id.* at 95.

40. Drumbl, *supra* note 20, at 127–28.

41. Rome Statute, *supra* note 2, art. 22(2).

similar provisions of ENMOD and Protocol I for interpretive assistance.⁴²

ENMOD requires the proscribed environmental damage to be "widespread, long-term, or severe." The use of "or" instead of "and" means that ENMOD's scope of punishable conduct is far broader than Article 8(2)(b)(iv)'s.⁴³ Further broadening the scope of environmental damage covered under ENMOD are the definitions that ENMOD's Committee on Disarmament attached to the words "widespread," "long-term," and "severe."⁴⁴ For example, "widespread" means an area of several hundred square kilometers, "long-term" means approximately a season, and "severe" means seriously or significantly disruptive or harmful to life or natural resources.⁴⁵ In contrast, Protocol I defines "long-lasting" as a period of at least decades, fails to define the two other terms, and requires the damage to be of all three types.⁴⁶ Furthermore, there is considerable agreement that Protocol I interprets "widespread" and "severe" narrowly.⁴⁷ It has yet to be determined which definition controls, but Protocol I is much closer to Article 8(2)(b)(iv) in that both require damage to be "widespread, long-term, *and* severe."⁴⁸ The fact that ENMOD's Committee on Disarmament suggested that its textual interpretation should not prejudice interpretations of similar terms in other agreements further bolsters the contention that Protocol I should provide greater guidance.⁴⁹ Article 8(2)(b)(iv) also inherits the requirement from Protocol I that the proscribed attack be, "clearly excessive in relation to the concrete and direct overall military advantage anticipated."⁵⁰ The drafters of Article 8(2)(b)(iv) intentionally took the language from Protocol I by adding "clearly" and "overall," thus creating an *actus reus* that is less amicable to prosecutors than the already prosecutorial-unfriendly language from the Nuremburg Charter.⁵¹ Because the Rome Statute was drafted in light of the established international criminal standards in the Geneva Conventions, it is likely that its drafters intended to build upon Protocol I. If the Protocol I definitions do indeed apply to Article 8(2)(b)(iv), then it will be "nearly

42. Drumbl, *supra* note 20, at 127–28; Lawrence & Heller, *supra* note 3, at 72.

43. Rome Statute, *supra* note 2.

44. Drumbl, *supra* note 20, at 128.

45. *Id.*

46. *Id.*

47. Lawrence & Heller, *supra* note 3, at 73.

48. *Id.* (emphasis added).

49. Drumbl, *supra* note 20, at 128.

50. Rome Statute, *supra* note 2; Protocol I, *supra* note 13.

51. Lawrence & Heller, *supra* note 3, at 77.

impossible” to meet the *actus reus* in most circumstances.⁵²

The Article’s *mens rea* requires knowledge that “widespread, long-term, and severe” environmental damage will result from the attack and knowledge that the damage is disproportionate to the “overall military advantage anticipated.”⁵³ An Article 8(2)(b)(iv) prosecution can only succeed if a commander knows what “widespread, long-term and severe damage” means, knows that his conduct will cause such damage, and knows that the damage will likely be disproportionate to the anticipated advantage of the military operation. As is clear, it is difficult for a defendant to know what “widespread, long-term and severe damage” means when there is no legal consensus on its meaning.⁵⁴ A commander charged under Article 8(2)(b)(iv) could present a mistake of law defense by pleading that he misunderstood the scope of “widespread, long-term, and severe damage,” and, because the definition of that term comes from outside the Rome Statute, such a defense could likely win.⁵⁵

Another barrier to application of Article 8(2)(b)(iv) is the fact that it only applies to an “international armed conflict.”⁵⁶ The Rome Statute provides no protection for the environment from war crimes during internal armed conflict. Limiting environmental protection solely to the realm of international armed conflict is a step backwards from ENMOD, which makes no distinction between intra-national and international armed conflicts.⁵⁷ The prosecution is further limited in its use of Article 8(2)(b)(iv) by the fact that there is an intentional jurisdictional exemption limiting the application of Article 8(2)(b)(iv) to high-ranking commanders that are in a position to decide the scope of an attack.⁵⁸ Thus, the article cannot be used against field officers that are not responsible for the planning of an environmental attack, the thinking being that such officers cannot be deterred from committing crimes they had no part in planning. Finally, it does not appear that drafters will amend the Rome Statute to encompass internal conflicts because the signatories seem content with Article 8(2)(b)(iv) and any expansion of the ICC’s power will adversely impact the prospects of non-party states

52. *Id.* at 95.

53. Rome Statute, *supra* note 2.

54. *Id.* This creates a problem similar to the qualified immunity problem in §1983 actions where U.S. government officials are individually immune from civil prosecution for civil rights violations if the law violated was not clearly established. *See generally* Hope v. Pelzer, 536 U.S. 730, 739–40 (2002).

55. Lawrence & Heller, *supra* note 3, at 79.

56. Rome Statute, *supra* note 2, art. 8(2)(b).

57. Bruch, *supra* note 22, at 703.

58. Lawrence & Heller, *supra* note 3, at 84.

joining the court.⁵⁹

A state is unlikely to agree to ICC jurisdiction over commanders who are suppressing internal dissent and defer to their own legal institutions to ensure that their commanders act consistently with treaty obligations. The drafters of the Rome Statute acknowledged this problem, and ICC jurisdiction is explicitly complementary to state jurisdiction.⁶⁰ However, states have yet to adequately embrace their obligation to control the environmental damage of internal conflict criminally.⁶¹ Essentially, under the current structure, if a state declines to prosecute a commander whose conduct even meets the stringent Article 8(2)(b)(iv) standard because the government holds him as the hero of the state's civil war and pardons him, there is no redress possible because of sovereignty's shield. Reliance on domestic jurisdiction to prosecute offenses during an "internal conflict" could also serve to legitimize malicious prosecutions of rebel commanders for environmental war crimes, while the government fails to prosecute its own commanders for similar violations. The result of this system is unjust because it gives non-international combatants substantial relief from ICC prosecution and thus relief from liability for attacks on the natural environment.

The internal conflict exemption, although intentionally derived from the sovereign state model—i.e. the nation-state model that assumes international law should not touch upon the sovereign inner-workings of a state because nation states are autonomous international actors—is a dangerous holdover from an era of state versus state conflict that has since passed and renders the revolutionary Article 8(2)(b)(iv) largely impotent.⁶² This is partly due to the modern nature of war; the age of military conquest, with a few notable exceptions, did not survive World War II.⁶³ However, complicated conflicts with actors that may not be states but have some sort of state sponsorship make sorting out the difference between international armed conflicts and intra-national armed conflicts "complex if not impossible."⁶⁴ If it is "complex if not impossible" to determine whether or not a conflict is international, then Article 8(2)(b)(iv) will only be applied in the clearest circumstances of international armed conflict so as to avoid embarrassing jurisdictional dismissals.

59. Lopez, *supra* note 30, at 245.

60. Rome Statute, *supra* note 2, pmbl.

61. See Lawrence & Heller, *supra* note 3, at 85.

62. *Id.*

63. Boaz Atzili, *When Good Fences Make Bad Neighbors: Fixed Borders, State Weakness, and International Conflict*, 31 INT'L SECURITY 139, 142 (2006).

64. Lopez, *supra* note 30, at 236.

The terms defining environmental crimes are so vague, and the jurisdictional and systemic hurdles that must be cleared are so high, that barring some change in the language of Article 8(2)(b)(iv), environmental war crime prosecution is unlikely to ever occur.⁶⁵ The Rome Statute revolutionized the scope of environmental war crimes by extending international criminal protection to the environment independent of its utility to man, but an excessively difficult to meet *actus reus* and *mens rea*, combined with the non-international armed conflict exception, limits the functional value of Article 8(2)(b)(iv) to discussions on its ineffectiveness.

III. UNIVERSAL JURISDICTION

The *Princeton Principles on Universal Jurisdiction* describes “universal jurisdiction [a]s criminal jurisdiction based solely on the nature of the crime, without regard to where the crime was committed, the nationality of the victim, or any other connection to the state exercising such jurisdiction.”⁶⁶ Universal jurisdiction originated to combat high seas piracy but has since evolved considerably to punish slavery, war crimes, crimes against peace, crimes against humanity, genocide, and torture.⁶⁷ However, universal jurisdiction’s evolution has been fraught with difficulties regarding the relationship between universal jurisdiction and sovereignty.⁶⁸ Despite the tension, states can broadly interpret their power to use universal jurisdiction to prosecute international criminals when they obtain physical custody of the war criminal.

A. High Seas Origins

Pirates are always subject to prosecution by states with a connection to their crimes, provided such a state has physical custody of the pirate, regardless whether the state was directly harmed and regardless of the citizenship of the pirate.⁶⁹ This tradition flies in the face of traditional jurisdictional requirements. The rationale for creating universal

65. Lawrence & Heller, *supra* note 3, at 95.

66. THE PRINCETON PRINCIPLES ON UNIVERSAL JURISDICTION (2001), reprinted in UNIVERSAL JURISDICTION: NATIONAL COURTS AND THE PROSECUTION OF SERIOUS CRIMES UNDER INTERNATIONAL LAW, 21 (Stephen Macdeco ed., 2004).

67. *Id.*

68. CrimA 336/61 *Eichmann v. Attorney Gen.* [1962] 36 I.L.R. 277, available at <http://www.enotes.com/genocide-encyclopedia/eichmann-2>.

69. Randall, *supra* note 7, at 793.

jurisdiction was the need to protect the freedom of the high seas for the trading empires of Europe. Therefore, jurisdiction over pirates was satisfied by mere custody.⁷⁰ Pirates acted repugnantly and indiscriminately while threatening the commercial "intercourse among states."⁷¹ Although universal jurisdiction over piracy existed for centuries under customary international law, it was eventually codified and currently exists at Article 105 of the United Nations Convention on the Law of the Sea which permits "every state [to] seize a pirate ship . . . arrest the persons and seize the property on board . . . [and] decide upon the penalties to be imposed."⁷² States to this day rely can upon this authority to interdict pirates that haunt the world's maritime chokepoints.⁷³

The British Empire's control of the oceans during the nineteenth century allowed it to successfully push for treaties authorizing states to search the ships of each other's merchant fleets for suspected slave traders.⁷⁴ These complex treaties included specific provisions for prosecution and punishment.⁷⁵ Eventually, the treaty language became strong enough to allow the Royal Navy to subject slave traders to the same treatment as pirates on the high seas.⁷⁶ Although these treaties did not mention universal jurisdiction by name, and slavery was far from being universally reviled—the practice was still widespread globally when the British Empire abolished it, the practical effect of the push for global abolition through treaties was to extend universal jurisdiction over slave traders.⁷⁷

Although pirates and slave traders eventually were similarly treated under the law, the punishment of slave traders markedly increased the scope of universal jurisdiction offenses.⁷⁸ Piracy and slave trading are both difficult to prosecute because their crimes occur on the high seas, but unlike piracy, slave trading did not pose a threat to the global economic order, nor was it universally seen as morally objectionable.⁷⁹ The reason the slave trade became subject to universal jurisdiction involves the combination of the British people's moral objections to

70. *Id.*

71. *Id.* at 795.

72. U.N. Convention on the Law of the Sea, Dec. 10, 1982, 21 I.L.M. 1261.

73. *See id.*

74. Randall, *supra* note 7, at 799–800.

75. *Id.*

76. *Id.*

77. Kontorovich, *supra* note 10, at 193–94.

78. *See id.*

79. *See id.*

slavery and the enforcement mechanism of the British Navy.⁸⁰ British naval hegemony forced the world to accept that slave traders were *hostis humani generis*, and could not escape justice through jurisdictional loopholes. Justice Marshall acknowledged this in *The Antelope*, where the British captured African slaves that were being transported by the French. Despite acknowledging that slave traders were *hostis humani generis*, the United States returned the slaves to the French because (1) the “law of nations” had yet to catch up with the growing abolition movement and (2) French law still allowed slavery.⁸¹ As British power expanded in the nineteenth century, however, the “law of nations” adjusted to hold the slave trade equivalent to piracy.⁸² Although universal jurisdiction’s scope expanded dramatically with the addition of slavery, it still was limited to punishing those acting toward private ends; government actors still enjoyed immunity.⁸³ Unfortunately, another great moral crime had to occur for the next extension of universal jurisdiction.

B. Universal Jurisdiction and Nuremburg

In holding that Israel could prosecute a Nazi war criminal despite the fact the alleged offense occurred in Poland before Israel existed, the Sixth Circuit quoted the Restatement (Third) of Foreign Relations Law of the United States § 404:

The wartime allies created the International Military Tribunal which tried major Nazi officials at Nuremberg and courts within the four occupation zones of post-war Germany which tried lesser Nazis. All were tried for committing war crimes, and it is generally agreed that the establishment of these tribunals and their proceedings were based on universal jurisdiction.⁸⁴

The IMT and its lesser courts used the principle of universal jurisdiction to prosecute numerous suspects despite the fact that these suspects were largely acting as state agents and were mostly in custody in the jurisdiction where their offenses took place.⁸⁵ Part of the consideration behind piracy and slavery as universal jurisdiction offenses was the practical infeasibility of using other forms of jurisdiction when such suspects by trade are on the high seas much of the time, and outside

80. *See id.* at 194 n.61.

81. 23 U.S. 66, 118 (1825).

82. *See Randall, supra* note 7, at 799.

83. *Id.* at 804.

84. *Demjanjuk v. Petrovsky*, 776 F.2d 571, 582–83 (6th Cir. 1985), *cert. denied*, 475 U.S. 1016 (1986).

85. *Id.*

the power of the state where they have their citizenship.⁸⁶ The fact that the four occupying powers conducted the tribunals in Germany, however, indicates that German-run tribunals were practically feasible from a physical venue perspective. Nevertheless, the underlying egregious nature of the Axis crimes, plus a fear of Nazis escaping justice in German courts, triggered the international concern necessary for the allied powers to utilize universal jurisdiction.⁸⁷ While the proceedings of the IMT are sparse with references to universal jurisdiction, it is widely recognized that the proceedings were based in universality principles.⁸⁸ The lesser tribunals used universal jurisdiction more explicitly than did the IMT out of fear that war criminals prosecuted domestically would receive inappropriately light punishments.⁸⁹ Piracy and slave trading, independent of the underlying nature of the crime, are subject to universal jurisdiction in part because of the high probability of offenders escaping justice; these lesser tribunals created the precedent that fear of inadequate punishment of particularly egregious crimes could create universal jurisdiction.

Although the IMT was successful in creating individual criminal responsibility for many Axis war criminals, many notable war criminals, by committing suicide or fleeing the country, escaped justice at Nuremberg. The quest to bring to justice those who fled wherever found solidified the statutory method by which individual states could use universal jurisdiction.

C. Eichmann's Precedential Value and the Validity of Statutory Universal Jurisdiction

As the Allied tribunals wrapped up their work, it was obvious that many potential war criminals had escaped prosecution by the tribunals, either by suicide or flight. In the case of Adolf Eichmann, he was able to escape from Allied custody in 1946 and made his way to Argentina under the assumed name Ricardo Klement in 1950.⁹⁰ After an elaborate surveillance operation, Israeli commandos eventually found Eichmann in Buenos Aires and abducted him in order to stand trial in Israel for his role in the Holocaust.⁹¹ Although the kidnapping caused an international

86. See Randall, *supra* note 7, at 794–95.

87. See *id.* at 804, 806–08.

88. Demjanjuk, *supra* note 84.

89. Randall, *supra* note 7, at 807.

90. Wade A. Buser, *The Jaffe Case and the Use of International Kidnapping as an Alternative to Extradition*, 14 GA. J. INT'L & COMP. L. 357, 370 (1984).

91. Gary J. Bass, *The Adolf Eichmann Case: Universal and National Jurisdiction*, in *UNIVERSAL JURISDICTION: NATIONAL COURTS AND THE PROSECUTION OF SERIOUS*

stir and there was a question whether the proceeding would create international precedent, the trial itself has created case law as to when domestic statutes can extend universal jurisdiction. The actual proceedings, separate from the abduction, comported with international standards excellently.⁹² Israel actually changed its law to allow Eichmann his choice of counsel—Robert Servatius, a notable German defense attorney who practiced at Nuremberg—who was given “free rein” to conduct the defense.⁹³ Even vociferous critics of the abduction before the trial, like Hannah Arendt and American Nuremberg prosecutor Telford Taylor, acknowledged that the proceedings should form valid precedent if fair and just.⁹⁴ Indeed, during and after the trial, both critics lauded the fairness of the proceedings.⁹⁵

The Israeli trial of Adolf Eichmann had to rely on universal jurisdiction for two reasons: (1) the alleged crimes did not occur in Israel and (2) the crimes preexisted the creation of Israel.⁹⁶ There was absolutely no territorial or residency connection between Eichmann’s crimes and Israel.⁹⁷ Israel enacted the Nazi and Nazi Collaborators Law in 1950 to give Israeli courts jurisdiction over those who committed “crimes against the Jewish people.”⁹⁸ The Israeli trial court based its jurisdiction on two principles: that (1) crimes against humanity are sufficient to create universal jurisdiction and (2) nation-states have an interest in punishing those who assault the nation that comprises the state.⁹⁹ The Israeli trial court decision, and the Israeli Supreme Court affirmation of it, relies heavily on universal jurisdiction.¹⁰⁰ The Israeli Supreme Court dismissed the notion that Israel could not prosecute crimes that predate its existence because states act as guardians of international law, and it is their collective duty to prosecute crimes that arouse sufficient international concern to invoke universal jurisdiction.¹⁰¹ The American born Israeli Supreme Court Justice Simon Agranat held, in upholding the use of the Nazi and Nazi Collaborators Law against Eichmann, that “international law . . . authoriz[es] the countries of the

CRIMES UNDER INTERNATIONAL LAW 77, 80 (Stephen Macedo ed., 2004).

92. *Id.* at 88–89.

93. *Id.*

94. *Id.*

95. *Id.*

96. Matthew Lippman, *Genocide: The Trial of Adolf Eichmann and the Quest for Global Justice*, 8 BUFF. HUM. RTS. L. REV. 45, 107–08 (2002).

97. *Id.*

98. Bass, *supra* note 91, at 85.

99. Randall, *supra* note 7, at 811.

100. Bass, *supra* note 91, at 85.

101. See *Eichmann*, *supra* note 68, at 303–05.

world to mete out punishment of its provisions.”¹⁰² That is essentially the same argument Blackstone made when he spoke of the collective duty of states to fight pirates. Indeed, when international or *ad hoc* tribunals are unavailable for any reason, including unwillingness to prosecute, no other actor can enforce international law as effectively as a state can, simply because states have courts of general jurisdiction that can handle the case load.

Allowing states to use domestic courts to try international criminals is something the Geneva Conventions envisions for “grave breaches.”¹⁰³ The provision explicitly relies upon universal jurisdiction for enforcement by mandating state prosecution regardless of the alleged offender’s nationality.¹⁰⁴ The Torture Convention mandates that parties prosecute offenders regardless of nationality, or extradite them to a state that will.¹⁰⁵ States have the obligation to use their domestic legal systems as the sword of international law according to Justice Agranat.¹⁰⁶ Many states also believe they have such an obligation and have enacted legislation to serve this enforcement role, and the American attitude toward universal jurisdiction exhibits why it is crucial to create institutional inertia with regard to universal jurisdiction.

*D. Having Your Cake and Eating It Too: American
Universal Jurisdiction*¹⁰⁷

The American politicians who pushed for the passage of the American Service Members’ Protection Act, which essentially authorizes the President of the United States to use military force to invade the Netherlands—an original NATO ally—to “liberate” any American personnel detained by the ICC, represent a strain of popular sentiment that is greatly skeptical of international law.¹⁰⁸ Universal jurisdiction is highly objectionable to these nationalists who hold sovereignty to be

102. PNINA LAHAV, JUDGMENT IN JERUSALEM: CHIEF JUSTICE SIMON AGRANAT AND THE ZIONIST CENTURY 154 (1997).

103. Roger O’Keefe, *The Grave Breaches Regime and Universal Jurisdiction*, 7 J. INT’L CRIM. JUSTICE 811, 813 (2009).

104. *Id.*

105. Kenneth Roth, *The Case for Universal Jurisdiction*, 80 FOREIGN AFF. 150, 151 (2001).

106. LAHAV, *supra* note 102.

107. The inspiration for this title is the title of a South Park episode where it is learned that saying one thing and doing another is what makes America great.

108. Robert Marquand, *Will Obama Reverse ‘Invasion of The Hague’ Act?*, ABC NEWS, <http://abcnews.go.com/print?id=6870071> (last visited Nov. 11, 2010).

wholly inviolable;¹⁰⁹ states with powerful nationalist movements are subject to the popular current of politics that significantly hinders the ability of their governmental institutions to comply with international criminal law.¹¹⁰ This becomes especially problematic when states that liberally use universal jurisdiction change their laws under pressure from more powerful states that are militarily active and fear liberal application of universal jurisdiction will result in substantial command liability. For example, in 2003 this very problem occurred when General Tommy Franks, the recently resigned commander of United States Central Command, was targeted for investigation under the Belgian universal jurisdiction law.¹¹¹ The United States quickly threatened Belgium economically, and the Belgians quickly repealed the universal jurisdiction law to ensure that the investigation of General Franks and the outstanding investigations of Jiang Zemin, Ariel Sharon, George H.W. Bush, Dick Cheney, Colin Powell, and Norman Schwarzkopf stopped.¹¹²

While it seems the United States vigorously objects to universal jurisdiction reaching its citizens, it simultaneously uses universal jurisdiction broadly to obtain jurisdiction over citizens of other countries. In *Filartiga v. Peña-Irala*, the Second Circuit, holding that the United States had jurisdiction over a Paraguayan torturer who only tortured Paraguayans in Paraguay, said that, “the torturer has become like the pirate and slave trader before him *hostis humani generis*, an enemy of all mankind.”¹¹³ In a case arising one year later, the Northern District of California held that that terrorist attacks on internationally protected persons are subject to universal jurisdiction because the threat of terrorism is considered “as great a threat to the well-being of the international community as piracy was in an earlier time and therefore properly included within this type of jurisdiction.”¹¹⁴ In *Demjanjuk v. Petrovsky*, the Sixth Circuit essentially affirmed the Israeli ruling in *Eichmann* by allowing the United States to extradite a suspected war

109. See Henry Kissinger, *The Pitfalls of Universal Jurisdiction: Risking Judicial Tyranny*, 80 FOREIGN AFF. 86 (2001).

110. Compare Clinton's Statement on War Crimes Court, BBC (Dec. 31, 2000), available at <http://news.bbc.co.uk/2/hi/1095580.stm> with John Bolton, Letter from John R. Bolton, Under Secretary of State for Arms Control and International Security to Kofi Annan, Secretary General of the United Nations, informing Mr. Annan of the suspension of the U.S. signature (May 6, 2002), available at <http://amicc.org/docs/bolton.pdf>.

111. See Ian Black, *Franks May Face War Crimes Charge*, THE GUARDIAN (Apr. 30, 2003), available at <http://www.guardian.co.uk/world/2003/apr/30/iraq.warcrimes>.

112. Wolfgang Kaleck, *From Pinochet to Rumsfeld: Universal Jurisdiction in Europe 1998-2008*, 30 MICH. J. INT'L L. 927, 933-34 (2009).

113. *Filartiga*, *supra* note 10, at 890.

114. *United States v. Layton*, 509 F. Supp. 212, 214 (N.D. Cal. 1981), appeal dismissed, 645 F.2d 681 (9th Cir. 1981), cert. denied, 452 U.S. 972 (1981).

criminal to Israel for crimes in Poland predating Israel's existence.¹¹⁵ Before Pablo Escobar's assassination, the United States considered an operation to abduct the infamous drug trafficker in Colombia, and the intended justification was universal jurisdiction over drug traffickers.¹¹⁶ Before the 1988 American invasion of Panama rendered them moot, similar plans were contemplated to seize then Panamanian President Manuel Noriega.¹¹⁷ Extraordinary rendition, a practice much more troubling than the Israeli kidnapping of Eichmann, if only because the United States has done it more than once and secretly, is based on the theory that universal jurisdiction authorizes it.¹¹⁸ The evidence suggests that the United States, despite its distaste for the international criminal prosecution of its own citizens, heartily endorses universal jurisdiction for others and encourages its judicial institutions to recognize it.

The United States may have politicians who grandstand against international law to play to nationalist audiences fearful of any threat to traditional notions of sovereignty, but its laws and actions support a broad application of universal jurisdiction that allows American courts to hear cases from around the world concerning a wide variety of subject matter. The American example illustrates why national legal systems must sometimes be the sword of international law. First, because powerful states have undue influence on international criminal prosecutions, multiple potential fora are ideal to lessen this influence. Secondly, because national legal systems are much more responsive than international legal systems, they can be used to test the limits of international law and provide greater guidance for later courts, both national and international.

E. The Enduring Problem of Extradition

In 1993, the Belgian Parliament enacted the *Loi du 16 Juin*, executing its obligations under Geneva I and II, and giving Belgian courts jurisdiction over war crimes, whether or not a traditional nexus to Belgian jurisdiction existed.¹¹⁹ This gave sweeping power to the Belgian courts to try international war crimes because Belgian criminal procedure

115. *Demjanjuk*, *supra* note 84, at 582–83.

116. Bass, *supra* note 91, at 87.

117. *Id.*

118. Gregory S. McNeal & Brian J. Field, *Snatch and Grab Ops: Justifying Extraterritorial Abduction*, 16 TRANSNAT'L L. & CONTEMP. PROBS. 491, 500 (2007).

119. *Loi du 16 juin 1993 relative à la répression des infractions graves aux Conventions internationales de Genève du 12 août 1949 et aux Protocoles I et II du 8 juin 1977*, June 16, 1993 (MONITEUR BELGE, Aug. 5, 1993).

gives victims extraordinary rights to initiate investigations.¹²⁰ The law was amended in 1999 to enlarge Belgian universal jurisdiction to encompass crimes against humanity and genocide; the amendment also affirmatively forbade official immunity for heads of state.¹²¹ Soon enough, complaints flooded in from around the globe seeking to use the Belgian courts for crimes arising on six continents accusing most every notable political leader of crimes against humanity.¹²² This swamped the Belgian prosecutors who had to investigate the deluge of claims, but convictions resulted from the law in 2001 against four Rwandans for their part in the 1994 genocide.¹²³

On April 11, 2000, Belgium issued an international arrest warrant for Congolese Foreign Minister Abdoulaye Yerodia Ndombasi.¹²⁴ The Democratic Republic of Congo challenged the warrant in front of the International Court of Justice claiming that Belgium violated international law by issuing a warrant for an incumbent minister, effectively arguing that the 1999 Belgian universal jurisdiction law violated international law with its reach over incumbent ministers.¹²⁵ The ICJ handed down a ten-to-six ruling forcing Belgium to cancel the warrant for violating the inviolable immunity that incumbent ministers enjoy from criminal prosecution under international law.¹²⁶ This was a striking blow for universal jurisdiction; a commander who commits war crimes is subject to universal jurisdiction so long as he is not a governmental minister. The fear of home states protecting their war criminals using jurisdictional obstruction—states can simply assign commanders it wants to protect to ministerial positions and then turn them loose—was realized. While *Arrest Warrant* does not stand for immunity after a minister has left office, French prosecutors cited the ruling when they dropped charges filed by victims of torture against former U.S. Secretary of Defense Donald Rumsfeld because he enjoyed “customary” immunity from prosecution for official acts after leaving office.¹²⁷ Implicitly, the prosecutors interpreted the Torture Convention as being inapplicable to governmental officials as long as the alleged

120. Roozbeh B. Baker, *Universal Jurisdiction and the Case of Belgium: A Critical Assessment*, 16 ILSA J. INT'L & COMP. L. 141, 9 (2009).

121. *Id.* at 12–13.

122. *Id.* at 14.

123. *Id.*

124. *Arrest Warrant of 11 April 2000* (Dem. Rep. Congo v. Belg.), 2002 I.C.J. 3, 4.

125. *Id.*

126. *Id.* at 34.

127. James Mackenzie, *French Prosecutors Throw out Rumsfeld Torture Case*, Reuters (Nov. 23, 2007), available at <http://www.reuters.com/article/politicsNews/idUSL238169520071123>.

torture was an "official act."

The French prosecutor's interpretation of the Torture Convention is notably at odds with Lord Browne-Wilkinson's interpretation of it in *Ex parte Pinochet*.¹²⁸ Augusto Pinochet, the former Chilean dictator, was in front of the British House of Lords for his final appeal of the ruling to extradite him to Spain after months of hearings and re-hearings.¹²⁹ Pinochet's primary defense at this point was that his organization of state torture was an official function of the Chilean Head of State, and thus he enjoyed state immunity for his actions.¹³⁰ While the ruling upheld earlier precedent bestowing immunity to heads of state for their official functions even after leaving office, the ruling rejected Pinochet's argument that state torture was an official function.¹³¹ "[C]ontinued immunity for ex-heads of state is inconsistent with the provisions of the Torture Convention" because of the "bizarre results" that would be produced if parties had to waive their state immunity defense before jurisdiction could be imposed for torture when the treaty authorizes universal jurisdiction for torture.¹³² The fact that Pinochet was never sent to Spain does not impact the precedential value of this ruling; Pinochet only avoided Spanish Magistrate Baltasar Garçon's courtroom because of a controversial political decision regarding his physical fitness to stand trial.¹³³ Unfortunately, the decision of the French prosecutors regarding Rumsfeld's investigation does not seem founded in an actual judicial interpretation of the Torture Convention, but on a political desire to avoid the ire of a state that had just recently authorized the use of military force against its close NATO ally, the Netherlands, to "liberate" its troops from The Hague if the ICC gained custody over them.¹³⁴

Even in circumstances where a suspected international criminal is not under the official protection of a state, other circumstances can thwart extradition. Although the fugitive problem can haunt any prosecution, it is especially bad in the context of apprehending international criminal suspects. So many Nazis escaped justice immediately after World War II that many were not uncovered until

128. *R v. Bartle ex parte Pinochet*, [2000] 1 A.C. 147 (H.L. 1999), reprinted in 38 I.L.M. 581. (1999).

129. Richard A. Falk, *Assessing the Pinochet Litigation*, in *UNIVERSAL JURISDICTION: NATIONAL COURTS AND THE PROSECUTION OF SERIOUS CRIMES UNDER INTERNATIONAL LAW* 97, 110-14 (Stephen Macedo ed., 2004).

130. *Id.*

131. *Id.*

132. *Bartle ex parte Pinochet*, *supra* note 128, at 590.

133. *Pinochet Set Free*, BBC (Mar. 2, 2000), available at http://news.bbc.co.uk/2/hi/uk_news/663170.stm.

134. See Marquand, *supra* note 108.

decades later.¹³⁵ In Serbia, Radovan Karadzic, was able to evade capture not because he fled to Argentina like Eichmann, but because he grew a beard and reinvented himself as new age psychiatrist, Dragan Dabic.¹³⁶ Former military and political leaders often have broad support networks that assist them in fleeing justice, either with the assistance of loyalists still in power or some sort of underground network. In spite of these networks, no conspiracy is needed to evade justice by getting lucky at a checkpoint. But the fugitive problem is not unique to international crimes; there are plenty of domestic fugitives that pose considerable headaches for domestic prosecutions. The fugitive problem does not undermine universal jurisdiction in legal systems where in absentia criminal trials are procedurally appropriate because courts can secure a conviction, and sentencing can be handled once custody of the criminal is obtained.

While the scope of universal jurisdiction rapidly expanded in the post-war period over the objections of some, and criminals were prosecuted using universal jurisdiction, the practical limits to universal jurisdiction prevent widespread application.¹³⁷ Sovereignty still remains supreme; jurisdiction may be universal, but justice is not.

IV. TAKING THE NEXT STEP: EXPANDING UNIVERSAL JURISDICTION TO ENCOMPASS ENVIRONMENTAL WAR CRIMES

Universal jurisdiction is far from the perfect solution for prosecuting international crimes. If it were, the ICC would be superfluous, and Belgian prosecutors would not be swamped with requests to try major world leaders, whom prosecutors could never realistically obtain custody over. However, the international tribunals that exist today, whether they sit permanently with wide jurisdiction like the ICC, or they sit temporarily with limited jurisdiction as in an *ad hoc* tribunal, have their origins in universal jurisdiction because they are all children of Nuremberg. The first prosecutions using universal jurisdiction over piracy, slave trading, war crimes, and crimes against humanity were crucial in establishing the definitions and norms that provide international tribunals tools for interpreting the law that is

135. See Demjanjuk, *supra* note 84.

136. Ellie Tzortzi, *Karadzic Arrested in Serbia, Worked as Doctor*, Reuters (July 22, 2007), available at <http://www.reuters.com/article/topNews/idUSL2196241820080722>.

137. Randall, *supra* note 7; Kissinger, *supra* note 109.

applied to offenders today.¹³⁸ The emergence of torture and terrorism as universal jurisdiction offenses reinvigorated the *hostis humani generis* doctrine and shows that as the interests of humankind change over time, so do the enemies of humankind.

Environmental war crimes punished by Article 8(2)(b)(iv) of the Rome Statute are unique among war crimes in that the actual physical victim is not a person. It is difficult to assess the extent of the damage done to the environment; prosecutors can more easily approximate the number of people harmed, tortured, or raped because, in the end, the common denominator is human lives. The interconnectedness of ecosystems can make seemingly localized environmental damage actually far more widespread and severe than upon first impression.¹³⁹ Global commerce and the global environment both rely on the harmonious interaction between different actors. Therefore, pirates and environmental war criminals similarly pose senseless and existential threats to networks vital to humankind. Pirates are not *hostis humani generis* because their crimes are especially shocking or the actual impact of their crimes global, but because of the senseless and existential threat that their crimes—in the aggregate—pose to the global trade network.¹⁴⁰ Environmental war crimes are similar in that the crimes are not shocking, nor are the impacts of such crimes necessarily global. Indeed, “widespread, long-term, and severe environmental” damage occurs all the time around us from daily activities, but environmental war crimes, in the aggregate, pose a senseless and existential threat to the natural environment.

Failure to use universal jurisdiction to punish environmental war criminals because their crimes do not arouse an international concern comparable to other universal jurisdiction crimes is incorrect. Deterrence is an appropriate aim of universal jurisdiction when it comes to piracy because, although one act of piracy will not bring down global trade, allowing pirates to escape justice emboldens other pirates. The resultant unchecked piracy could imperil world trade. The same applies to environmental war crimes. The failure to punish war criminals that senselessly abuse the environment emboldens others to do the same, whether they would do so in vengeance or to gain a miscalculated tactical advantage. Destructive acts that imperil the health of the global environment are the concern of the international community, at least as much as the isolated acts of pirates. The lack of an individual victim does

138. See Randall, *supra* note 7.

139. Lynn Berat, *Defending the Right to a Healthy Environment: Toward a Crime of Geocide in International Law*, 11 B.U. INT'L L.J. 327, 348 (1993).

140. See generally Randall, *supra* note 7.

not defeat universal jurisdiction because the universality principle on which it relies is based on prosecuting offenses that by their nature cause injury to the international community.¹⁴¹

The Rome Statute's recognition of the environment as an entity of value independent of human utility was a major victory for the environment. It shifted the dialogue from the issue of whether wartime environmental protection is necessary to the issue of what the breadth of environmental protection during wartime should be. The success is largely moral, though. To kick start the development of environmental war crime law, states should enact domestic statutes, based on the language of Article 8(2)(b)(iv), to extend universal jurisdiction over environmental war crimes while building precedent that will help the ICC use Article 8(2)(b)(iv). Such action is supported by current universal jurisdiction practices that incorporate the Rome Statute into domestic criminal codes.¹⁴²

One of the major obstacles to charging under Article 8(2)(b)(iv) is that the critical terms in the *actus reus* are undefined at the same time a conviction requires knowing intent on the part of the defendant.¹⁴³ This makes international environmental war crimes prosecution essentially impossible. States should therefore adopt the same "widespread, long-term, and severe damage" language from Article 8(2)(b)(iv) in their criminal codes with useful definitions. By doing so, states will begin to develop the legal standards surrounding environmental war crimes. Ideally, states will avoid including the military advantage defense and define "widespread, long-term, and severe damage" broadly, as is done in ENMOD. But as long as states avoid employing radically different standards in defining the key terms—and effectively close the non-international conflict loophole—the precedent created will lay the foundation for more ambitious attempts at prosecuting environmental war criminals in international tribunals.

Although the usual obstacles to international prosecution remain—extradition, ministerial immunity, fugitives, and selective enforcement—states that extend universal jurisdiction over environmental war crimes will gain custody over at least a few suspects, and that is all that is really needed at this point. Even a handful of universal jurisdiction prosecutions for environmental war crimes will radically advance the state of environmental war crime law and lay the foundation for successful international prosecutions.

141. See O'Keefe, *supra* note 103, at 823.

142. See generally Baker, *supra* note 120.

143. Rome Statute, *supra* note 2.

V. CONCLUSION

While the Rome Statute's recognition of war crimes against the environment was a major development in international criminal law, the limited jurisdiction of the ICC over "international" environmental war crimes and the ambiguity of the language within the statute significantly limit the effectiveness of the environmental war crime provision in the Rome Statute. The limits are so substantial that no one has been, nor is anyone likely to be, prosecuted as an environmental war criminal at the ICC. There is considerable confusion regarding the very basic terms of statute, and prosecutors are focusing their efforts on crimes with clearer language and better-developed precedent, many of which were developed using universal jurisdiction prior to the ICC's creation. Prosecutors recognize the problem, yet they are unable to establish a workable prosecution scheme because the international justice system has failed to develop the international criminal law to the point where international prosecution is a feasible option.

Universal jurisdiction is reserved to prosecute the worst offenses the international community recognizes to ensure that they will not go unpunished. While environmental war crimes are new to the international criminal justice system, their impact is of considerable international concern, and all offenders currently escape prosecution. States are responsible for the enforcement of international law and can take it upon themselves to enforce international criminal law. Such a groundbreaking statute should not be left to languish because of substantial obstacles to prosecution at the ICC.

Individual states can jumpstart the development of environmental war crime law by adopting universal jurisdiction statutes that encompass environmental war crimes, and their courts can begin the task of applying the law. National courts can resolve the myriad issues regarding prosecution and build institutional inertia to insulate the laws against domestic nationalist backlash against aggressive use of universal jurisdiction. Once a body of law is created, the ICC can use the new precedent to effectively prosecute war criminals that destroy the environment in the context of an international conflict. Furthermore, legal development assists other states that wish to begin prosecution of domestic offenders by providing an established set of rules to emulate.

Although there are hurdles to enforcement, Article 8(2)(b)(iv) of the Rome Statute shows that protection of the environment is paramount to many people in the world today. It is increasingly understood that the environment deserves greater protection under the law, independent of its utility to man. The current challenge is, where do we go from here?

The ICC is paralyzed, and this paralysis cannot undermine the achievement of Article (8)(2)(b)(iv). States must respond to the challenge that the current legal environment presents and criminalize environmental war crimes using universal jurisdiction. This closes the internal conflict loophole, if states desire, and cements the international prohibition against environmental war crimes into the body of international law. The most dangerous thing to do is nothing. If Article 8(2)(b)(iv) sits on the shelf un-enforced, it will demonstrate the international community's lack of seriousness with regard to environmental war crimes. The law will have zero effect on the actual conduct of human beings. Universal jurisdiction built the foundation for international criminal responsibility, and it is once again necessary to build the foundation of Article 8(2)(b)(iv).

The International Legal Challenges of Climate-Induced Migration: Proposal for an International Legal Framework

Benoit Mayer*

ABSTRACT

Tens and maybe hundreds of millions of people have been or are about to be displaced because of rising sea levels or land degradation induced by global warming. In some cases, internal displacement of the population is not possible, either because their territory may become entirely uninhabitable (*e.g.*: the Maldives) or because the unaffected part of their territory is not able to absorb the whole displaced population (*e.g.*: Bangladesh). The increasing masses of “climate migrants” cannot benefit from any appropriate protection under today’s international law, as they do not fulfill legal conditions to be treated as “refugees.” The vulnerability of climate migrants is contrary to the humanitarian conception of Human Rights and goes against the principle of common but differentiated responsibility for climate change. An international legal framework on climate change-induced migrations should be established as soon as possible to provide a sustainable solution, protect affected individuals and communities, and reconcile international funding and local decision-making. It would be unlikely that an

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international treaty could receive a sufficient number of ratifications to be efficient and, additionally, it would not be able to sufficiently take into account the specificity of each migration scenario. Therefore, this paper proposes a framework that could be adopted by a United Nations General Assembly resolution. The proposed resolution would recognize climate migrants' fundamental rights, but could also create an agency in charge of facilitating and supervising bilateral or regional ad hoc negotiations on the resettlement of the most affected populations.

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I. INTRODUCTION

A. Purpose and Structure

The present Article argues that climate migrants should be granted some protection in a third-party country as soon as their state becomes unable to protect their most fundamental human rights. Small island developing states, where internal displacement will be impossible, demonstrate a clear case for this necessity. Larger countries that are not going to become fully uninhabitable make for a more difficult case, but international protection of climate migrants may still be necessary under certain conditions. In particular, countries such as Bangladesh, Egypt, Nigeria, and Vietnam are already facing high demographic pressure and will be unable to cope with the foreseeable loss of inhabitable territory resulting from climate change.¹

This Article proposes an international legal framework on climate-induced migration. Part I introduces the migratory consequences of climate change and defines climate migrants. Part II argues for the creation of an international legal framework for climate change-induced migration. Populations will not always be able to adapt to climate change in situ and, under certain circumstances, no option will be left but to move. There are several alternative justifications for involvement of the international community, but no existing international legal standard or regime provides sufficient protection to climate migrants. Part III conceives the international legal framework argued for in Part II. First, it lists five guiding principles that should be applied in such a framework. Afterwards, it takes a pragmatic approach and attempts to conceive a realistic path for an international framework to be adopted and implemented. Part IV then presents a concrete proposal of an international legal framework on climate-induced migration. It assumes that an ambitious convention could surely not be ratified at the global

1. See, e.g., Alice Poncelet, *Bangladesh Case Study Report: The Land of Mad Rivers*, (Jan. 30, 2009), http://www.each-for.eu/documents/CSR_Bangladesh_090126.pdf; Tamer Afifi, *Egypt Case Study Report*, (Jan. 30, 2009), http://www.each-for.eu/documents/CSR_Egypt_090130.pdf; Ulrike Grote & Koko Warner, *Environmental Change and Migration in Sub-Saharan Africa*, 2 INT'L J. GLOBAL WARMING 17, 36 (2010); Jamila Abdullahi et al., *Rural – Urban Migration of the Nigerian Work Populace and Climate Change Effects on Food Supply: A Case Study of Kaduna City in Northern Nigeria*, (June 28–30, 2009), <http://siteresources.worldbank.org/INTURBANDEVELOPMENT/Resources/336387-1256566800920/6505269-1268260567624/Abdullahi.pdf>; Olivia Dun, *Viet Nam Case Study Report: Linkages Between Flooding, Migration and Resettlement*, (Jan. 30, 2009), http://www.each-for.eu/documents/CSR_Vietnam_090212.pdf.

level and probably not at a regional level in the short or medium-term. Yet, concrete results may be reached in regional forums or through bilateral negotiations if they are facilitated by an international structure. Therefore, I suggest that a resolution by the United Nations General Assembly (“UNGA”) should create and monitor a global framework that would be implemented through bilateral and regional negotiations and cooperation and funded by the international community through a United Nations (“UN”) agency.

B. Climate Change and its Migratory Consequences

1. Climate Change and Human Population

During recent years, scientists have reached a consensus on the existence of climate change, even though the exact scope of this phenomenon remains somewhat uncertain.² In 2007, the International Panel on Climate Change (“IPCC”) concluded in its *Fourth Assessment Report* that “[w]arming of the climate system is unequivocal.”³ During the twentieth century, the average global temperature increased by 0.76°C, and it is expected to increase by a further 1.8°C to 4°C during the twenty-first century.⁴ Consequently, sea levels rose by 17 centimeters during the last century, rising at a rate of 3.1 millimeters per year between 1993 and 2003.⁵ The extent to which sea levels are going to rise during the twenty-first century remains uncertain.⁶ Though not taking into account ice sheet reaction, the IPCC forecast a further rise, between 18 and 59 centimeters, by the end of the century.⁷ More recently, the “Copenhagen Diagnosis” concluded that the “global sea level is likely to rise at least twice as much as projected.”⁸ Beyond global warming and sea level rise, climate change is highly likely to result in more frequent and more severe weather phenomena, such as droughts, heavy

2. See, e.g., INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS. CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 12–17 (2007), available at <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf> [hereinafter IPCC WG I].

3. *Id.* at 5.

4. *Id.* at 5, 13.

5. *Id.* at 5–7.

6. *Id.* at 13–14.

7. *Id.* at 5–14.

8. Ian Allison et al., *The Copenhagen Diagnosis: Updating the world on the Latest Climate Science* 7 (Nov. 2009), http://www.ccrcc.unsw.edu.au/Copenhagen/Copenhagen_Diagnosis_LOW.pdf.

precipitation, extreme heat, and tropical storms.⁹

There is little doubt that climate change is the result of human activity, in particular the emission of greenhouse gases.¹⁰ Although human beings are responsible for climate change, they also suffer from its diverse consequences. Economic activities, such as agriculture, forestry, and fishery, may be locally impeded.¹¹ Human life and health are also affected due to extreme heat, natural disasters, and a resurgence of certain diseases such as malaria, which together are estimated to cause over 140,000 excess deaths annually.¹² One of the most dramatic human consequences of global warming could concern human settlement. Climate change is degrading the conditions of life in many inhabited territories, sometimes forcing people to move.

2. *Three Migratory Scenarios*

Until recently, climate-induced migration was given little consideration by both migration studies and environmental governance.¹³ However, over the course of the past decade, a growing number of contributions relating to environmental migrants have focused on climate-induced migration.¹⁴ Yet, unsurprisingly, climate change-induced migration has exclusively been conceived of as the displacement of people *from* a place negatively affected by climate change rather than as a displacement *to* places positively affected by this phenomenon. In fact, climate change might induce migration by attracting people to newly inhabitable territories or to places offering new economic

9. IPCC, *supra* note 2, at 8.

10. *Id.* at 10.

11. See, e.g., Dr. Charles Ehrhart, Poverty-Climate Change Coordinator, CARE Int'l, At the Crossroads of Poverty Reduction and Climate Change: New Challenges, New Opportunities for CARE (Aug. 6, 2006) (presentation slides available at http://www.careclimatechange.org/files/CARE_docs/Climate_Change_and_Nepal.pdf) (describing how global warming threatens Nepali agricultural productivity through temporary flooding and degradation of arable land and reduction in yields of cereal crops).

12. World Health Org., *Climate Change and Health*, (Jan. 2010), <http://www.who.int/mediacentre/factsheets/fs266/en/index.html> <http://www.who.int/mediacentre/factsheets/fs266/en/index.html> (last visited July 2, 2011) [hereinafter WHO].

13. Olivia Dun & François Gemenne, *Defining 'Environmental Migration'*, 31 FORCED MIGRATION REV., Oct. 2008, at 10, 10, available at <http://www.fmreview.org/FMRpdfs/FMR31/FMR31.pdf>.

14. Global Governance Project, *Climate Refugees: Hotspots and Numbers*, <http://www.glogov.org/?pageid=82> (last visited July 3, 2011) (containing a comprehensive review of works written on climate migration, some of which are cited in this article).

opportunities as a result of climate change.¹⁵ This perception of migration as a burden rather than an opportunity results in an “emigration” approach, rather than an “immigration” approach.

Three scenarios where climate change-induced immigration can occur have been generally identified in low-lying islands, coastal areas, and regions affected by land degradation. The first scenario of climate change-induced migration concerns low-lying islands.¹⁶ In 1998–1999, two islands under the jurisdiction of Kiribati disappeared underwater.¹⁷ In 2005, a thousand inhabitants of the Carteret Islands were evacuated to another island in Papua New Guinea.¹⁸ In 2006, Lohachara Island in the Ganges Delta, where 10,000 inhabitants used to live, was totally submerged.¹⁹ In many cases, however, a very slight rise of the sea level in a particularly vulnerable environment may combine with natural erosion and human activity to render the islands uninhabitable.²⁰ Many other islands are at high risk.²¹ Even without being totally submerged, low-lying islands suffer from more frequent and more violent storms, the infiltration of saltwater threatening domestic agriculture, rapid erosion, and droughts.²² In particular, the risk is critical for Small Island Developing States (“SIDS”), such as Tuvalu and the Maldives, which are very likely to become fully uninhabitable by the mid-century.²³

A second scenario of climate change-induced migration concerns coastal areas, in particular deltas where the local rise in sea level could

15. For instance, Russia and Canada: *See infra* notes 121, 92.

16. *See* Ilan Kelman, *Island Evacuation*, 31 FORCED MIGRATION REV., Oct. 2008, at 20, 20, available at <http://www.fmreview.org/FMRpdfs/FMR31/FMR31.pdf>.

17. John Vidal, *Pacific Atlantis: First Climate Change Refugees*, THE GUARDIAN (Nov. 25, 2005), <http://www.guardian.co.uk/environment/2005/nov/25/science.climate.change>.

18. *Id.*; *see also* Displacement Solutions, *The Bougainville Resettlement Initiative Meeting Report*, (Dec. 11, 2008), <http://displacementsolutions.org/files/documents/BougainvilleResettlementInitiative-MeetingReport.pdf>.

19. *See* Geoffrey Lean, *Disappearing World: Global Warming Claims Tropical Island*, THE INDEPENDENT, Dec. 24, 2006, available at <http://www.independent.co.uk/environment/climate-change/disappearing-world-global-warming-claims-tropical-island-429764.html>.

20. *See* Kelman, *supra* note 16, at 20.

21. *Id.*

22. *See* IPCC, CONTRIBUTION OF WORKING GROUP II TO THE FOURTH ASSESSMENT REPORT OF THE IPCC 687, 691 (2007), available at <http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter16> [hereinafter IPCC WG II]; U.N. FRAMEWORK CONVENTION ON CLIMATE CHANGE [UNFCCC], CLIMATE CHANGE: IMPACTS, VULNERABILITIES AND ADAPTATION IN DEVELOPING COUNTRIES 24 (2007); OLI BROWN, INT’L ORG. FOR MIGRATION, MIGRATION AND CLIMATE CHANGE 25 (2008).

23. *See* Kelman, *supra* note 16, at 20.

far exceed the global average.²⁴ The Mekong Delta in Vietnam is inhabited by 18 million people.²⁵ Half of Vietnamese rice is produced in the Delta, but higher flooding imperils the population's resilience and forces more people to other regions of the country.²⁶ In the Ganges-Brahmaputra Delta half a million people are displaced every year as a result of flooding.²⁷ Ericson found that approximately 9 million people around forty deltas worldwide will soon be displaced.²⁸ Storms, erosion, and temporary floods will affect even more people.²⁹ Massive internal displacements create a highly sensitive situation in developing countries, which are in demographic transition and whose environmental resources may be subject to increased competition.³⁰ For instance, Bangladesh is populated by more than 1,000 inhabitants per square kilometer, but most of its territory lies very near the current sea level.³¹

A third scenario results from desertification and land degradation. There is no clear scientific consensus on the exact scope of this phenomenon, but, according to Reich et al., half of Africa's arable lands are at some risk of desertification or degradation.³² The slow destruction of agriculture in low-developed countries leaves no choice for populations but to move to survive. In West African Sahel, several countries, in particular Nigeria, are already facing ongoing desertification conjugated with "one of the highest population growth rates in the world."³³ On the North American continent, land degradation is

24. See IPCC WG II, *supra* note 22, at 747, 812–814 (showing "local sea level change due to change in ocean density and dynamics"); see also C.D. Woodroffe et al., *Landscape Variability and the Response of Asian Mega-Deltas to Environmental Change*, in GLOBAL CHANGE AND INTEGRATED COASTAL MANAGEMENT: THE ASIA-PACIFIC REGION 277 (2006).

25. Dun, *supra* note 1, at 3.

26. *Id.* at 9–10.

27. See KOKO WARNER ET AL., CARE INT'L, IN SEARCH OF SHELTER: MAPPING THE EFFECTS OF CLIMATE CHANGE ON HUMAN MIGRATION AND DISPLACEMENT 2:13 (2009), available at http://www.care.org/getinvolved/advocacy/pdfs/Migration_Report.pdf.

28. Jason P. Ericson et al., *Effective Sea-Level Rise and Deltas: Causes of Change and Human Dimension Implications*, 50 GLOBAL PLANET & PLANETARY CHANGE 63, 78 (2006).

29. See IPCC WG II, *supra* note 22, at 858.

30. See Dun, *supra* note 1.

31. See U.N. DEP'T OF ECON. AND SOC. AFFAIRS, POPULATION DIV., WORLD POPULATION PROSPECTS: THE 2008 REVISION (2009), available at http://www.un.org/esa/population/publications/wpp2008/wpp2008_text_tables.pdf.

32. See P.F. Reich et al., *Land Resource Stresses and Desertification in Africa*, in RESPONSES TO LAND DEGRADATION (E.M. Bridges et al. eds., 2001); see also IPCC WG II, *supra* note 22 at 439, 442.

33. Anthony Nyong & Charles Fiki, Drought-Related Conflicts, Management and Resolution in the West African Sahel, 25 (paper presented to the Human Security and

considered to be the origin of internal displacement or migration of 700,000 to 900,000 Mexican people every year and may foster emigration to the United States.³⁴

The increase of natural hazards is a further reason for concern because it exacerbates other factors of vulnerability. Climate change causes more violent and more frequent extreme phenomena.³⁵ Scientific surveys show that natural hazards may result in much greater human risk than rise of the sea level.³⁶ The Bangladesh Delta is particularly vulnerable to sudden storm surges, including instances where up to two-thirds of the land mass has been inundated after extreme weather phenomena.³⁷ Climate change-driven natural hazards may also result in pandemics and in intrusions of salt water.³⁸ McLeman and Brown distinguish between “climate process,” defined as “slow-onset changes,” and “climate events,” consisting of “sudden and dramatic hazards.”³⁹ A climate event that occurs on a background of a slow climate process may be the straw that breaks the camel’s back and pushes a population into exodus.

3. *A Wide-Scale Phenomena, though Difficult to Estimate*

The scope of climate change-induced displacements is still very much debated,⁴⁰ partly because an individual’s decision to move is often

Climate Change International Workshop of Asker, Norway, 21 June 2005), *available at* http://www.gechs.org/downloads/holmen/Nyong_Fiki.pdf.

34. See U.N. Convention to Combat Desertification, Thematic Fact Sheet Series No. 3: Migration and Desertification, 1, *available at* <http://www.unccd.int/documents/Desertificationandmigration.pdf> [hereinafter UNCCD Thematic Fact Sheet Series No. 3]; Alexandra Deprez, *Climate Migration in Latin America: A Future ‘Flood of Refugees’ to the North?*, COUNCIL FOR HEMISPHERIC AFFAIRS (February 22, 2010), *available at* <http://www.coha.org/climate-migration-in-latin-america-part-1/>.

35. IPCC WG I, *supra* note 2, at 7–9.

36. IPCC WG II, *supra* note 22, at 17, *available at* <http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-spm.pdf>.

37. M. Monirul Qader Mirza, *Global Warming and Changes in the Probability of Occurrence of Floods in Bangladesh and Implications*, 12 GLOBAL ENVTL. CHANGE 127, 128 (2002); *see also* WARNER ET AL., *supra* note 27, at 2:13; IPCC WG II, *supra* note 22, at 333; Lynne Peeples, *The Bigger Kahuna: Are More Frequent and Higher Extreme Ocean Waves a By-Product of Global Warming?*, SCIENTIFIC AMERICAN (Feb. 2, 2010), *available at* <http://www.scientificamerican.com/article.cfm?id=big-waves-northwest> (showing that “[i]ncreasing maximum wave heights off the Pacific Northwest coast may pose a greater threat than rising sea levels).

38. IPCC WG II, *supra* note 22, at 18.

39. BROWN, *supra* note 22, at 17–18.

40. *See, e.g.*, Roger Harrabin, *Climate Mass Migration Fears ‘Unfounded,’* BBC NEWS (February 4, 2011), *available at* <http://www.bbc.co.uk/news/science-environment->

induced by a combination of factors rather than by one single factor.⁴¹ This is evident because “environmental migration commonly presents itself where there is a slow onset of environmental change or degradation process (such as desertification) affecting people who are directly dependent on the environment for their livelihood and causing them livelihood stress.”⁴² Thus, environmental degradation is often a *driver* of displacement, but rarely is it the *unique cause*, as people also take into account factors such as economic opportunities, insecurity, attachment to a territory, the cost of relocation, and their perspectives on a new place to settle and new opportunities to be found there.⁴³ Therefore, considering migrant workers, political refugees, and climate migrants as alternative categories may not adequately reflect the complexity of individual decisions. Moreover, the link between specific bad environmental conditions and climate change may be difficult to establish: a bad harvest and hunger often lead to migration, whether or not they result from climate change, war, bad governance, or any other reason.

There is a lack of statistics on the ongoing climate change-induced migration on which a forecast could be based. The International Organization for Migration (“IOM”) considers, however, that “gradual and sudden environmental changes are already resulting in substantial population movements,” and that in 2008, “20 million persons have been

12360864; Cecilia Tacoli, *Not Only Climate Change: Mobility, Vulnerability and Socio-economic Transformations in Environmentally Fragile Areas of Bolivia, Senegal and Tanzania*, 28 RURAL-URBAN INTERACTIONS & LIVELIHOOD STRATEGIES 1 (2011), available at <http://pubs.iied.org/10590IIED.html>.

41. See, e.g., William B. Wood, *Ecomigration: Linkages between Environmental Change and Migration*, in GLOBAL MIGRANTS, GLOBAL REFUGEES 42 (Aristide R. Zolberg & Peter Benda eds., 2001); Stephen Castles, *Environmental Change and Forced Migration: Making Sense of the Debate* (Oct. 2002); MICHELLE FOSTER, INTERNATIONAL REFUGEE LAW AND SOCIO-ECONOMIC RIGHTS: REFUGE FROM DEPRIVATION 5–21 (2007); see also PIERS M. BLAIKIE, ET AL., AT RISK: NATURAL HAZARDS, PEOPLE'S VULNERABILITY AND DISASTERS (1994) (highlighting the socio-political component of natural hazards).

42. Dun & Gemenne, *supra* note 13, at 10.

43. See, e.g., Tamer Afifi & Koko Warner, *The Impact of Environmental Degradation on Migration Flows Across Countries* 3–4 (UNU-EHS Working Paper No. 5, 2008), available at <http://www.indiaenvironmentportal.org.in/files/Working%20Paper%20No%205%202008.pdf>; Richard Black, *Environmental Refugees: Myth or Reality?* (UNHCR, New Issues in Refugee Research, Working Paper No. 34, 2001), available at <http://www.unhcr.org/3ae6a0d00.html>; Mike Hulme, *Commentary: Climate Refugees: Cause for a New Agreement?* 50 ENV'T. MAGAZINE 50 (Nov.–Dec. 2008), available at <http://www.environmentmagazine.org/Archives/Back%20Issues/November-December%202008/hulme-full.html>; Alexandra Deprez, *Climate Refugees, 'Hotspot' Case Study: Mexico*, COUNCIL FOR HEMISPHERIC AFFAIRS (Feb. 27, 2010), available at <http://www.countercurrents.org/deppez270210.htm> (showing that frequent hurricanes accelerate the decision of Mexicans living in Chiapas to migrate).

displaced by extreme weather events, compared to 4.6 million internally displaced by conflict and violence over the same period.”⁴⁴ Distinguishing people moving because of the degradation of soil in the Sahel or a rise of the sea level in Bangladesh from those making the same journey for another reason is almost impossible. In particular, no record is kept of internal displacements.⁴⁵ Therefore, a vast amount of uncertainty remains as to the scope of future climate-induced displacements.⁴⁶ Myers recognized that his estimation of 200 million climate-displaced persons by 2050 was based on “heroic extrapolations”⁴⁷ and later updated to 250 million.⁴⁸ Other estimations range up to 1 billion persons.⁴⁹ The UN Secretary-General considers credible estimations to be “between 50 million and 350 million.”⁵⁰ These figures are particularly large compared with today’s 214 million foreign-born individuals worldwide and 16 million political refugees.⁵¹ It is likely that many of these climate-displaced persons will remain in their own country, but some scenarios will necessarily lead to emigration.

C. Definition of Climate Migrants

Black complained in 2001 that “[t]here are abundant typologies of ‘environmental refugees’ and ‘environmental migrants,’ but little

44. Int’l Org. for Migration, *Migration, Climate Change and Environmental Degradation: A Complex Nexus*, <http://www.iom.int/jahia/Jahia/complex-nexus> (last visited July 3, 2011).

45. BROWN, *supra* note 22, at 25.

46. See generally, Dominic Kniveton et al., *Challenges and Approaches to Measuring the Migration-Environment Nexus*, in *MIGRATION, ENV’T AND CLIMATE CHANGE: ASSESSING THE EVIDENCE* 41, 43 (Frank Laczko & Christine Aghazarm eds., 2009).

47. *Id.*; see also Norman Myers, *Environmental Refugees: An Emergent Security Issue* (2005), available at <http://www.osce.org/eea/14851> (paper presented to the 13th OSCE Economic Forum, Prague, May 23, 2005).

48. Interview with Norman Myers (London, Mar. 14, 2007), cited in *Human Tide: The Red Migration Crisis: A Christian Aid Report*, at 48 (2007) (revising his estimation to 250 million climate migrants).

49. See Harald Winkler, *A Billion Climate Refugees by 2050?*, ENG’G NEWS (Sept. 2008), available at <http://www.engineeringnews.co.za/article/a-billion-climate-refugees-by-2050-2008-09-19>.

50. U.N. Secretary-General, *Climate Change and Its Possible Security Implications: Rep. of the Secretary-General*, ¶ 54, U.N. Doc. A/64/350 (Sept. 11, 2009), available at <http://www.unhcr.org/refworld/pdfid/4ad5e6380.pdf>.

51. See Int’l Org. for Migration, *Facts & Figures*, <http://www.iom.int/jahia/Jahia/about-migration/facts-and-figures/lang/en> (last visited July 3, 2011) [hereinafter IOM, *Facts & Figures*]; United Nations High Commissioner for Refugees, *Refugee Figures*, <http://www.unhcr.org/pages/49c3646c1d.html> (last visited July 3, 2011).

agreement on, or understanding of what these categories might really mean.”⁵² Though some literature has tried to clarify the definitions during the last decade, the meaning of the words often remains quite unclear for lack of an official or widely accepted definition.⁵³ The notion of “climate migrant” coexists with that of “environmental migrants.” For the IOM, *environmental* migrants are defined as those who, “for compelling reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad.”⁵⁴ This definition adopts a pragmatic approach, as it indiscriminately includes people displaced by climatic events as well as by climatic process, people moving temporarily or permanently, people forced to move, and those choosing to do so.

For the sake of this Article, climate migrants will be defined more strictly. First, this Article deals with climate migration, not environmental migration. Climate migrants are people who are only moving because of global *climate change* as opposed to any “changes in the environment.” This difference has important consequences when dealing with the role of the international community, as it will be argued that the international community is responsible for causing climate change. On the contrary, dealing with *environmental* migration may be a way to evade any international substantive commitment through the historical rejection of responsibility.

Second, whereas the IOM’s definition demands that climate change is the *only* cause for displacement, it has already been mentioned that a decision to migrate generally takes into account a set of factors. Moreover, the way that climate change affects the inhabitability of a territory depends on adaptation capabilities. Thus, the most challenging definitional issue is probably the determination of a threshold of causal relationship between climate change and migration. Renaud et al. suggested a distinction between “environmental motivated migrants,” “environmental forced migrants,” and “environmental refugees.”⁵⁵ However, there is minimal utility in creating a kind of *semi-protection*

52. Black, *supra* note 43, at 13.

53. See Dun & Gemenne, *supra* note 13, at 10; Bonnie Docherty & Tyler Giannini, *Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees*, 33 HARV. ENVTL. L. REV. 349, 363 (2009).

54. Int’l Org. for Migration, *Discussion Note: Migration and the Environment*, ¶¶ 6–7 (Nov. 1, 2007), http://www.iom.int/jahia/webdav/shared/shared/mainsite/about_iom/en/council/94/MC_INF_288.pdf (last visited July 3, 2011).

55. Fabrice Renaud et al., *Control, Adapt or Flee: How to Face Environmental Migration?*, INTERSECTIONS, May 2007, at 3, 29–30.

status for would-be *semi-forced* climate migrants; one is either forced to migrate or not. Therefore, scholars should find a way to decide this question in binary terms. A solution may be found by analogy to the Refugee Convention, which does not require that persecution be the sole, or even the main, reason for the displacement of political refugees; it only requires that there *is* persecution.⁵⁶ The same objective criterion that a good reason *exists* rather than *has been a determinant of a personal choice* should be adopted concerning climate migrants.

Third, this Article focuses on the issue of *permanent* climate-induced migration, thus excluding persons fleeing an environmental catastrophe for a short period. Immersion, desertification, droughts, and land degradation necessarily lead to permanent migration. If climate change may also lead to temporary displacements in the case of a heavy climate event disconnected from any ongoing climate process, these displacements would be intrinsically different from permanent resettlement and are likely to be a less thorny legal issue *because* they are only temporary.

Fourth, while the IOM and a large part of the literature include persons displaced *internally* within the category of “climate migrants,” this Article focuses on *international* climate migrants. This Article does not argue that internal climate migrants should not be protected by the international community, but it merely assumes that their situation is not of the same nature as international climate migrants. In particular, internal displacement should mainly be monitored by states (with the assistance of the international community), whereas, by definition, international climate migrants are excluded from their state’s jurisdiction. Surely, an international program on “climate internally-displaced persons” should complete the international legal framework on international climate-induced migration that is the subject of this Article.

II. JUSTIFYING THE CREATION OF AN INTERNATIONAL LEGAL FRAMEWORK ON CLIMATE CHANGE-INDUCED MIGRATION

This first part argues that a new international legal framework on climate-induced migration should be created. Subpart A demonstrates that national responses to climate change-induced migration are insufficient and require an international normative intervention. Subpart B shows that current international law does not provide for any appropriate standard applicable to climate migrants.

56. Dun & Gemenne, *supra* note 13, at 10.

*A. The Need for International Legal Consideration of
Climate Change-Induced Migration*

This first Subpart argues that national responses to climate change are not sufficient to mitigate the effects of climate change and highlights some possible justifications for the international community's responsibility to protect climate migrants. This Article does not deal with mitigation of climate change but assumes that adaptation is necessary whatever the outcomes of a mitigation program may be because "[t]he benefits of mitigation will be experienced several decades after the implementation of cutbacks in [greenhouse gas], given the long persistence of the latter in the atmosphere."⁵⁷

1. The Limits of National Solutions

It is now common knowledge that "natural disasters" are not fully natural, since they depend heavily on social, economic, and political circumstances. This also applies to climate change, which is now known to have anthropogenic origins. However, this also applies to the consequences of climate change, as we often have the capacity to foresee natural phenomena and to prevent or mitigate any harm through appropriate policies. As Brown underscores, "[a] community's vulnerability . . . is a function of its *exposure* to climatic conditions (such as a coastal location) and the community's *adaptive capacity* (the capacity of a particular community to weather the worst of the storm and recover after it)."⁵⁸ The adaptive capacity is primarily a national matter. Under international human rights law, states must secure their own population's fundamental rights. As will be shown, international organizations have, however, helped states to implement this obligation. The two possible ways of coping with climate change will be examined in turn: adapting in situ or leaving.

a. In Situ Adaptation

In situ adaptation is a first-rank choice for adaptation to environmental change. For instance, a decision not to establish human settlements in flood plains will have little cost in comparison with the damages undergone otherwise. More specific ways of adapting to the local consequences of climate change have been implemented. Adaptation to land degradation may classically consist of culture diversification, water storage and management, irrigation systems, and

57. MARCO GRASSO, JUSTICE IN FUNDING ADAPTATION UNDER THE INTERNATIONAL CLIMATE CHANGE REGIME 13 (2010).

58. BROWN, *supra* note 22, at 18.

famine early warning systems. In contrast, desertification clearly calls for more radical policies. On June 17, 2010, a summit on the Great Green Wall gathered the representatives of the eleven most affected African states in N'Djamena, defining an ambitious project to plant a 7,000-kilometer-long, 15-kilometer-wide “strip of forest,” in order to “reforest the continent from west to east to battle desertification.”⁵⁹ However, national policies often take note that it is not possible to fight against climate change, and instead they prefer to focus on the aggravating factors, such as human overexploitation of land.⁶⁰ Such policies may slow down land degradation and desertification, but they will probably not reverse ongoing phenomena.

Adaptation to flooding allows more original ideas to be followed. For instance, the Bangladesh government built flow regulators along rivers. Similarly, the Maldives built a 3.5-meter-high wall around Male, its most inhabited island, reducing its vulnerability to natural hazards. In a more ambitious adaptation strategy, the Netherlands adopted a Flooding Defense Act and a Coastal Defense Policy, which included the project of building higher storm surge barriers, controlling the expansion of the rivers into side channels and wetlands, and leading regular safety reviews.⁶¹ Similarly, Singapore is contemplating the possibility of having dikes built by Dutch companies.⁶² Another form of adaptation consists of mitigating flooding damage as opposed to preventing floods, for instance through the creation of “‘floating gardens’ that rest on a bed of water hyacinths”⁶³ or raising ducks rather than chickens.⁶⁴

National adaptation programs have been encouraged by international organizations. The United Nations Development Programme (“UNDP”),⁶⁵ the World Bank,⁶⁶ the Organisation for

59. Global Env'tl. Facility, *Summit on the Great Green Wall*, <http://www.thegef.org/gef/node/3286> (last visited July 3, 2011).

60. REPUBLIC OF YEMEN ENV'T PROT. AUTH., NAT'L ADAPTATION PROGRAMME OF ACTION 48 (2009), available at <http://unfccc.int/resource/docs/napa/yem01.pdf>.

61. IPCC WG II, *supra* note 22, at 717, 722.

62. See *Planning for Climate Change: Singapore Wants Dutch Dikes*, SPIEGEL ONLINE INT'L (Apr. 24, 2007), <http://www.spiegel.de/international/world/0,1518,479061,00.html>; see also Chang Chian Wui, *Meeting the Challenges of Climate Change: Singapore*, in CLIMATE CHANGE AND WATER: INT'L PERSPECTIVES ON MITIGATION AND ADAPTATION 241, 247 (Carol Howe, Joel B. Smith & Jim Henderson eds., 2010).

63. See WARNER ET AL., *supra* note 27, at 20.

64. CARE, CARE USA ANNUAL REPORT 2007: THE CHANGING TIMES (2007), available at http://www.care.org/newsroom/publications/annualreports/2007/FY07_AnnualReport.pdf. Chickens are often drowned by flooding in Bangladesh. *Id.*

65. United Nations Dev. Programme, *Adapting to Climate Change*, http://www.undp.org/climatechange/pillar_adaptation.shtml (last visited July 3, 2011).

66. The World Bank, *Climate Change Adaptation*,

Economic Cooperation and Development ("OECD"), and the Asian Development Bank⁶⁷ have each set up their own program on adaptation to climate change, while the UN Convention to Combat Desertification calls for international cooperation and partnership. However, only very limited financial aid has been provided. The United Nations Framework Convention on Climate Change ("UNFCCC") supervised the creation of National Adaptation Programs of Actions⁶⁸ for least-developed countries, which was funded by an ad hoc voluntary trust fund administered by the Global Environment Facility ("GEF"). The GEF administers two other trust funds focused on climate change adaptation programs, and the GEF is the "largest funder of projects to improve the global environment."⁶⁹ Yet, none of these four funds has an annual budget reaching \$3 billion, which is the sole cost of the Dutch "Room for the River Program" that consists of improving security around rivers in the Netherlands.⁷⁰

b. Resettlement

Leaving one's home is, at least, the only option when adaptation is not possible, not affordable, or too dangerous. It seems quite consensual in scientific literature, as well as in publications by non-governmental organizations ("NGOs"), that in situ adaptation is not always possible. For instance, Brown underscores that "migration may be the only possible adaptive response in the case of some of the small island and low-lying states where rising seas will eventually flood large parts of the country."⁷¹ In 2009, NGOs unsuccessfully suggested inserting a framework for international resettlement programs in the Copenhagen Treaty.⁷²

<http://climatechange.worldbank.org/overview/climate-change-adaptation> (last visited July 3, 2011).

67. ASIAN DEV. BANK, CLIMATE PROOFING: A RISK-BASED APPROACH TO ADAPTATION xv (2005), available at <http://www.adb.org/Documents/Reports/Climate-Proofing/climate-proofing.pdf>.

68. See United Nations Framework Convention on Climate Change, *Least Developed Countries Portal* (June 5, 2011), http://unfccc.int/cooperation_support/least_developed_countries_portal/items/4751.php (last visited July 3, 2011).

69. Global Env't Facility, *GEF-Administered Trust Funds*, http://www.thegef.org/gef/trust_funds (last visited July 3, 2011); Global Env't Facility, *What is the GEF*, <http://www.thegef.org/gef/whatisgef> (last visited July 3, 2011).

70. See Room for the River Programme, *Room for the River: A Safer and More Attractive Rivers Region*, http://www.ruimtevoorderivier.nl/media/19174/factsheet_uk.pdf (last visited July 3, 2011).

71. BROWN, *supra* note 22, at 38.

72. See David Suzuki Found. et al., *A Copenhagen Climate Treaty Version 1.0: A proposal for an Amended Kyoto Protocol and a New Copenhagen Protocol by Members of the NGO Community*, art. 5, ¶ 25 (2009), available at http://assets.panda.org/downloads/treaty_vol2_web_compl.pdf.

However, the international community remains, to say the least, reluctant to acknowledge that resettlement may sometimes be necessary. For instance, an official report by the UNFCCC on “Climate Change: Impacts, Vulnerabilities and Adaptation in Developing Countries” stated that “international relocation is not an option”⁷³ for SIDS and then failed to suggest any possible adaptation track for low-lying SIDS, and only recommended research, meetings, and national or international partnerships. The Copenhagen Agreement only mentioned “adaptation actions aimed at reducing vulnerability and building resilience in developing countries,”⁷⁴ without considering resettlement as an option. Thus, the international community assumes that adaptation should be national,⁷⁵ and even domestic resettlement is rarely considered. This may be explained by the fear that recognizing resettlement as a legitimate solution at the national level would give an argument in favor of *international* resettlements in situations where national resettlement is not possible.

Within affected states, particularly SIDS, there are ongoing debates on the relevance of resettlement solutions, which are sometimes opposed or mistrusted by these states’ representatives. In favor of resettlement, the UN ambassador from Nauru denounced efforts to mitigate climate change consequences, saying they were focused on development, whereas “no amount of development could save the small islands from disappearing if global warming continues.”⁷⁶ Many fear that adaptation to climate change, either through in situ adaptation or resettlement programs could take the place of preventing climate change,⁷⁷ and resettlement is often associated with the loss of identity. For instance, Tuvalu’s Prime Minister reminded that “Tuvalu is a nation with a unique language and culture” and argued that “[r]esettlement would destroy the very fabric of [its] nationhood and culture.”⁷⁸

73. UNFCCC, *supra* note 22, at 44–45.

74. United Nations Framework Convention on Climate Change, Conference of the Parties, *Decisions Adopted by the Conference of the Parties*, ¶ 3, U.N. Doc. FCCC/CP/2009/11/Add.1 (Mar. 30, 2010) available at <http://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf>.

75. W. Neil Adger et al., *Adaptation to Climate Change in the Developing World*, 3 PROGRESS IN DEV. STUD. 179, 189–90 (2003).

76. Press Release, General Assembly, Our Challenges are Shared; So, Too, is Our Commitment to Enhance Freedom from Fear, Freedom from Want, Freedom to Live in Dignity, Says Secretary-General, U.N. Press Release GA/10942 (May 20, 2010), available at <http://www.un.org/News/Press/docs/2010/ga10942.doc.htm>.

77. See Karen Elizabeth McNamara & Chris Gibson, ‘We Do Not Want to Leave our Land’: Pacific Ambassadors at the United Nations Resist the Category of ‘Climate Refugees,’ 40 GEOFORUM 475, 480–82 (2009).

78. Apisai Ielemia, *A Threat To Our Human Rights: Tuvalu’s Perspective on*

Yet, climate-induced migrations are not something new. Adger highlights that “[m]igration . . . is a coping mechanism used throughout history by societies as part of their resource utilization strategies and as a means of coping with climate variability.”⁷⁹ In 1984 and 1985, 600,000 people were internally displaced in Ethiopia during the famine.⁸⁰ In the last decade, several resettlement programs have been set up by states to combat local consequences of climate change. For instance, the Vietnamese “living with floods” program organizes the resettlement of 20,000 landless and poor households in regularly flooded areas to very close but less endangered areas. Yet, it has been put forward that this program considerably weakened the social links of displaced people.⁸¹ In the United States, a “voluntary home buyout” program was created in Harris County, Texas, to displace households living in flood plains.⁸² However, resettlement programs so far have been limited to within national borders; as a result, the foe of climate migrants is not climate as much as borders and migration control.

c. The Limits of National Solutions

Zarsky shows that “[u]nsurprisingly, but worrisome nonetheless, the most vulnerable regions are the poorest.”⁸³ The Tropics are predicted to experience the most severe consequences of climate change, such as desertification and increased natural hazards. If rising sea levels theoretically cause equal concern in every coastal country, the vulnerability of the Tropics is increased by three factors: high demographic pressure, difficult settlement conditions, and little financial capacity. While all coastal states face challenges, “[p]oorer countries are under-equipped to support widespread adaptation.”⁸⁴ Therefore, one solution to the consequences of climate change on least-developed and developing countries might consist of huge international development aid. This would be extremely costly, and such generosity from Western governments may be deemed quite unlikely; overall, this would not be sufficient in all cases, as adaptation may be technologically impossible.

Climate Change, 44 UN CHRON. 18, 18 (2007).

79. Adger et al., *supra* note 75, at 189.

80. Helmut Kloos & Adugna Aynalem, *Settler Migration During the 1984/85 Resettlement Programme in Ethiopia*, 19 GEOJOURNAL 113, 113 (1989).

81. WARNER ET AL., *supra* note 27, at 15.

82. Harris Cnty. Flood Control Dist., *Voluntary Home Buyout*, <http://www.hcfd.org/buyout.asp?flash=yes> (last visited July 3, 2011).

83. Lyuba Zarsky, *Climate-Resilient Industrial Development Paths: Design Principles and Alternative Models*, in TOWARDS NEW DEVELOPMENTALISM: MARKET AS MEANS RATHER THAN MASTER 229 (Shahrukh Rafi Khan & Jens Christiansen eds., 2010).

84. WARNER ET AL., *supra* note 27, at iv.

In any case, this Article assumes that such massive aid will not be able to be given in time, and that in the short- or middle-term, a certain number of states will no longer be able to protect their populations from the life-endangering consequences of climate change.

2. Rationale of the International Community's Responsibility

This Article argues that the international community bears certain obligations toward populations affected by climate change, including setting up international resettlement programs for climate migrants. There could be different ways of justifying such a commitment from the international community, and these different justifications lead to very different forms of intervention. This paper briefly presents four types of arguments: a positivist argument based on treaty obligations, a humanitarian argument on solidarity and responsibility to protect, a fairness argument on the polluter-pays principle, and a realist argument based on the protection of world security.⁸⁵ These arguments are often complementary rather than alternative.

The international community's responsibility is first justified by obedience to the law. The UNFCCC provides that "[t]he developed country Parties . . . shall . . . 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."⁸⁶ Up to now, this provision led only to very limited financial aid to in situ adaptation, exclusive of any program on resettlement. Arguably, the 1992 convention drafters were not aware of the existence of a hypothesis whereby no choice would be left to populations but to leave their countries; therefore, the notion of "adaptation" in the UNFCCC should be understood as including national or international resettlement as need be.

A second possible justification relates to humanitarian assumptions. Nescient international solidarity may be invoked to justify a moral, if not legal, obligation of developed states to somehow intervene. The paradigm of human rights, recognizing dignity and fundamental rights to any human person, may also push for some political decisions to help populations facing disasters. If the protection of one population's human

85. For a more extensive discussion of "fraternity," "responsibility" and "sustainability" as alternative or complementary grounds for an international protection of climate migrants, see Benoit Mayer, *Fraternity, Responsibility and Sustainability: The International Legal Protection of Climate (or Environmental) Migrants at the Crossroads* (Mar. 2011), available at <http://ssrn.com/abstract=1806760>.

86. United Nations Framework Convention on Climate Change [UNFCCC], art. 4, § 4, May 9, 1992, 1771 U.N.T.S. 107.

rights is normally the responsibility of the nationally and territorially competent state, one may consider that other states bear a second-rank obligation. An obligation to protect has been recognized in the case of "genocide, war crimes, ethnic cleansing and crimes against humanity"⁸⁷ in a three-pillar structure. It is easy to draw a parallel between mass crimes and climate change, as both threaten entire populations' most fundamental rights. The first pillar is the classical "protection responsibilities of the state" towards its own inhabitants. Yet, the second and third pillars include respectively the international community through "[i]nternational assistance and capacity-building" and "[t]imely and decisive response."⁸⁸ A second-pillar obligation has been recognized in the climate change context through cooperation, the creation of partnerships, and funding of adaptation programs. The next step would be for the international community to recognize third-pillar obligation, consisting of intervening "in a timely and decisive manner when a state is manifestly failing to provide" protection.⁸⁹

A third possible justification of the international community's obligation relates to the general principle of responsibility.⁹⁰ There is no need to review sophisticated theories of fairness to notice the injustice of the human consequences of climate change. Most affected populations live in least-developed or developing countries, which have benefited little from the emission of greenhouse gases. On the opposite side, those who have emitted greenhouse gases are developed countries that will likely suffer much less from climate change.⁹¹ Some polluting states, like Canada and Russia, could even benefit from global warming, since some northern regions will become more inhabitable or exploitable.⁹²

87. U.N. Secretary-General, *Implementing the Responsibility to Protect: Rep't of the Secretary-General*, ¶ 11(a), U.N. Doc. A/63/677 (Jan. 12, 2009), available at <http://globalr2p.org/pdf/SGR2PEng.pdf>.

88. *Id.* ¶ 11(b)–(c).

89. *Id.* ¶ 11(c).

90. See generally, Romain Felli, *Justice globale pour les réfugié-e-s climatiques?*, 6 ASYLO(S) (2008), available at <http://www.reseau-terra.eu/article850.html>; Angela Williams, *Promoting Justice Within the International Legal System: Prospects for Climate Refugees*, in CLIMATE LAW AND DEVELOPING COUNTRIES, LEGAL AND POLICY CHALLENGES FOR THE WORLD ECONOMY 84, 90 (Yves Le Bouthillier, Benjamin J. Richardson & Heather Mcleod-Kilmurray eds., 2010).

91. See, e.g., Zarsky, *supra* note 83, at 229.

92. See, e.g., Jamie Hewitt et al., *Assessment of Climate Change Impacts on Agricultural Land-Use Suitability: Spring Seeded Small Grains on the Prairies* (2008) <http://www4.agr.gc.ca/AAFC-AAC/display-afficher.do?id=1210289174331&lang=eng> (arguing that "by 2040–2069, climate change would lead to a change in limitations over much of the Prairies' agricultural regions and some new opportunities may develop in northern areas"). However, on the short and medium-term, Canada and Russia may have to undergo adaptation to climate change, in particular to the melting of permafrost and

Therefore, the principle of tort responsibility may be invoked by affected developing states claiming a share of developed states' benefits. Alternatively, the doctrine of unjust enrichment may apply, allowing affected states to claim some part of the new opportunities appearing in northern states.⁹³ Besides being "moral," applying the polluter-pays principle could lead to economic efficiency, as it would favor domestic measures mitigating climate change through re-internalizing negative externalities in the cost of production. The Stern Review showed that a rational behavior of developed states taking externalities fully into account would consist of drastic measures to mitigate global warming.⁹⁴

A fourth justification of international intervention relates to peace and security.⁹⁵ Considering that some states will not be able to cope with the consequences of climate change, plenty of migrants will flee their countries, and many others will be displaced internally. International migration should be legal and monitored rather than be illegal and out of control. One can hardly imagine the human, but also the potential political and geopolitical, consequences of tens or hundreds of millions of additional undocumented migrants over the upcoming decades, compared with today's number of unauthorized migrants, estimated by the OECD to be more than 30 million.⁹⁶ Obviously, concerted migration schemes are preferred to emergency evacuation. In the absence of such a scheme, natural events, such as massive floods or severe cyclones in Asian deltas, might break the resilience of entire populations to climate change and lead to a domino effect whereby millions of people suddenly decide to leave. History has shown that such displacements can hardly happen without conflicts. This is especially true for our time, which is characterized by high population density in many regions of the world, states' sovereignty, and control of borders. According to Akhavan, post-9/11 international relations are characterized by "an emerging albeit grudging consciousness of humankind's inextricable interdependence" in

changes in the animal population.

93. Tort responsibility requires a wrongful act. In this case, the wrongful act may consist of pursuing greenhouse gas emissions in spite of scientific evidence indicating ongoing climate change, and in violation of the precautionary principle. In contrast, the doctrine of unjust enrichment does not require any wrongful act; therefore, a state's responsibility may be assessed even for historical pollution pre-dating any discovery of climate change.

94. NICHOLAS STERN, *THE ECONOMICS OF CLIMATE CHANGE: THE STERN REVIEW* vii (2006).

95. On climate change-induced migration and security, see generally Michael Renner, *Climate of Risk, Climate Change Poses new Challenges to Security Policy*, 23:1 *WORLD WATCH MAGAZINE* 18 (2010).

96. See OECD, *THE FUTURE OF INTERNATIONAL MIGRATION TO OECD COUNTRIES TO 2030* (2009).

“a world in which events in the most remote reaches of the planet would have inevitable repercussions on all.”⁹⁷ The areas of the world negatively affected by global warming or sea level rise, but abandoned by those responsible for climate change, could become the new Afghanistan, in which instability and violence would be the fertile ground of a new wave of terrorism. Therefore, Western governments cannot ignore the conflicts that are going to arise from climate change-induced migration.

Though the least convincing from an ethical perspective, the security approach may be a good driver to push developed countries to commit. For instance, security expert Söderblom published an alarmist article in a leading Australian security magazine warning of the risk that “potentially millions of poor and unskilled regional neighbours come begging for a new life.” Climate change could “raise the risk of people-smuggling syndicates targeting Australia,” whereas “[t]errorist groups could target Australians travelling overseas, orchestrate a terrorist attack upon Australia as retribution for the perceived damage to their environment, or attack Australian shipping in the Malacca Straits region.” Therefore, Söderblom concludes that “Australia needs to invest more time and money in scoping the impact of global warming and earn some credibility along the way by *being seen* to proactively drive improvements to the problem of global warming.”⁹⁸

Furthermore, security may constitute a legal argument to implicate the United Nations, whose first purpose is “[t]o maintain international peace and security,” which includes “tak[ing] effective collective measures for the prevention and removal of threats to the peace.”⁹⁹ On April 17, 2007, the United Kingdom organized a debate at the UN Security Council on climate change as a security issue.¹⁰⁰ Two years later, on June 3, 2009, the UNGA adopted a resolution on Climate and its Possible Security Implications, which “invite[d] the relevant organs of the United Nations, as appropriate and within their respective mandates, to intensify their efforts in considering and addressing climate change, including its possible security implications”¹⁰¹ and requested a report by the Secretary-General on the security implications of climate change.

97. Payam Akhavan, *Justice, Power, and the Realities of Interdependence: Lessons from the Milos Evi and Hussein Trials*, 38 CORNELL INT'L L.J. 973, 974 (2005).

98. Jason D. Söderblom, *Climate Change: National & Regional Security Threat Multiplier for Australia* 52 SECURITY SOLUTIONS 58, 60–61, 68 (2008) (emphasis added).

99. UN Charter art. 1, para. 1.

100. See U.N. Security Council [UN S.C.], Rep. of the Security Council, Apr. 17, 2007, U.N. Doc. S/PV.5663.

101. G.A. Res. 63/281, ¶ 1, U.N. Doc. A/RES/63/281 (June 3, 2009), available at <http://www.un.org/en/ga/63/resolutions.shtml><http://www.un.org/en/ga/63/resolutions.shtml>.

B. The Absence of Appropriate International Legal Standards Applicable to Climate Migrants

The previous Subpart has shown that there are good arguments for international legal “consideration” to be given to climate change migration. However, no existing specific international legal regime applies to climate migrants. In particular, climate change law focuses on climate change mitigation and adaptation, but it does not recognize a status for those who cannot adapt in their country and have to flee elsewhere. Recognizing climate migration for the first time ever, the Cancun Adaptation Framework contented itself with encouraging states to carry out “measures to enhance understanding, coordination and cooperation with regard to climate change-induced displacement, migration and planned relocation, where appropriate, at national, regional, and international levels.”¹⁰² Thus, this Subpart examines what Docherty and Giannini have called a wide “legal gap”¹⁰³ and looks at international law instruments concerning (1) refugee protection, (2) statelessness, (3) migrants, and (4) human rights generally.

A paradox is that international law does provide some protection in case of *internal* climate-induced displacements. As long as the victims of climate change do not cross a border, they benefit from the Guiding Principles on Internal Displacement, which applies to any person or group of persons “who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of . . . natural or human-made disasters, and who have not crossed an internationally recognized State border.”¹⁰⁴ Under this regime, internally displaced persons (“IDPs”), including

102. United Nations Framework Convention on Climate Change, Conference of the Parties, Dec. 7–19, 2009, *Outcome of the Work of the Ad Hoc Working Group on Long-Term Cooperative Action Under the Convention*, advanced unedited version, ¶ 14(f), U.N. Doc. A/CP.16 (Dec. 10, 2010), available at http://unfccc.int/files/meetings/cop_16/application/pdf/cop16_1ca.pdf [hereinafter UNFCCC COP 16]; see also, Benoît Mayer, *Cancun Conference on Climate Change: Enhanced Attention on Adaptation* (Center for International Sustainable Development Law, Working Paper, Jan. 2011), available at <http://www.cisd.org>; Inter-Agency Standing Committee [IASC], *Climate Change, Migration and Displacement: Who Will be Affected?* 1 (working paper submitted by the informal group on Displacement and Climate Change, 2008), available at <http://unfccc.int/resource/docs/2008/smsn/igo/022.pdf>.

103. Docherty & Giannini, *supra* note 53, at 357.

104. Representative of the U.N. Secretary-General, *Guiding Principles on Internal Displacement*, ¶ 2, U.N. Doc. E/CN.4/1998/53/Add.2 (1998), available at <http://www.unhcr.org/43ce1cff2.html>. Yet, the UN High Commissioner for Refugees adopted a more restrictive definition of internally displaced persons. See David Keane, *The Environmental Causes and Consequences of Migration: A Search for the Meaning of “Environmental Refugees”*, 16 GEO. INT’L ENVTL. L. REV. 209, 217 (2003).

climate-induced displacements, have the right “to receive protection and humanitarian assistance” from their state’s authorities, and a state shall not arbitrarily refuse international humanitarian assistance.¹⁰⁵ However, the United Nations High Commissioner for Refugees (“UNHCR”) has so far interpreted its mandate on IDP protection as limited to those IDPs “who, if they had breached an international border, would be refugees.”¹⁰⁶ Furthermore, due to its limited resources, the UNHCR has constantly maintained that it “does not have a general competence for internally displaced persons,”¹⁰⁷ and its intervention is far from automatic.¹⁰⁸ As it will be seen in the next section, this result excludes most of the climate change-induced IDPs from the UNHCR’s jurisdiction.

1. Inapplicability of Refugee Law

Climate or environmental migrants are often qualified as climate or environmental “refugees” in journalistic language,¹⁰⁹ and in some scientific literature.¹¹⁰ More than a mere question of vocabulary, this reflects an easily perceivable analogy and, in some cases, an argumentative posture based on this analogy. For instance, Stavropoulou underscores that “[t]here is nothing inherent in the ordinary meaning of the word ‘refugee’ that would suggest that people fleeing flooded homes . . . should not be considered as refugees.”¹¹¹ The analogy stems from the fact that both political refugees and climate migrants are fleeing a place where their safety is no longer ensured. The forced character of

105. Representative of the U.N. Secretary-General, *Guiding Principles on Internal Displacement*, Principle 3, ¶ 2, Principle 25, ¶ 2, U.N. Doc. E/CN.4/1998/53/Add.2 (1998), available at <http://www.unhcr.org/43ce1cff2.html>.

106. See, e.g., Keane, *supra* note 104, at 217; United Nations High Commissioner for Refugees [UNHCR], *Internally Displaced People*, <http://www.unhcr.org/pages/49c3646c146.html> (last visited July 3, 2011) (“Even if they have fled for similar reasons as refugees . . . , IDPs legally remain under the protection of their own government.”); Int’l Org. for Migration, *UNHCR’s Role with Internally Displaced Persons*, IOM/33/93-FOM/33/93, Apr. 28, 1993, § 8.

107. See, e.g., Int’l Org. for Migration, *UNHCR’s Role with Internally Displaced Persons*, IOM/33/93-FOM/33/93, Apr. 28, 1993, § 8.

108. See CATHERINE PHUONG, *THE INTERNATIONAL PROTECTION OF INTERNALLY DISPLACED PERSONS* 84 (James Crawford ed., 2004).

109. See, e.g., Lester R. Brown, *Climate Refugees’ Growing Tab*, U.S.A. TODAY, July 21, 2007.

110. See, e.g., Emma Brindal, *Asia-Pacific: Justice for Climate Refugees*, 32 ALT. L.J. 240 (2007); Hulme, *supra* note 43; Docherty & Giannini, *supra* note 53.

111. Maria Stavropoulou, *Drowned in Definitions?*, 31 FORCED MIGRATION REV., Oct. 2008, at 11, 12, available at <http://www.fmreview.org/FMRpdfs/FMR31/FMR31.pdf>.

displacement is often considered as the main difference between political refugees and “ordinary” migrants.¹¹² In this somewhat simplistic dichotomy, climate migrants should surely be considered closer to political refugees than to “ordinary” migrants. In addition, climate migrants flee deprivation of their core fundamental rights, in particular their right to life, more than they pursue a better standard of life in a more prosperous country. As a result, “climate refugees” and political refugees have some similar needs in terms of legal protection. In particular, the non-refoulement principle, which is at the core of the international protection of political refugees, is equally a moral requirement for climate refugees.¹¹³

The 1951 Refugee Convention, as modified by the 1967 Protocol,¹¹⁴ defines a refugee as any person who “owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country; or who, not having a nationality and being outside the country of his former habitual residence as a result of such events, is unable or, owing to such fear, is unwilling to return to it.”¹¹⁵ Consequences of climate change cannot fall per se within the definition of a “well founded fear of being persecuted.” Though most climate migrants would have no difficulty proving that they could suffer a sufficient level of harm, a generally insuperable difficulty stems from the “source-of-persecution” requirement that “the cause of the harm [be] either the government or a person or group of persons that the government is unwilling or unable to prevent from continuing the persecution.”¹¹⁶

112. See, e.g., United Nations High Commissioner for Refugees, *Flowing Across Borders*, <http://www.unhcr.org/pages/49c3646c125.html> (last visited July 3, 2011).

113. See, e.g., Nicole de Moor & An Cliquet, *Environmental Displacement: A New Challenge for European Migration Policy*, 7 (Paper presented to the Conference on “Protecting People in Conflict and Crisis: Responding to the Challenges of a Changing World”, Oxford, Sept. 22, 2009), available at <http://www.rsc.ox.ac.uk/PDFs/sessionIIIgroup5nicoledemoor.pdf>.

114. U.N. General Assembly, *Convention Relating to the Status of Refugees*, July 28, 1951, 189 U.N.T.S. 137 [hereinafter *Convention Relating to the Status of Refugees*]; U.N. General Assembly, *Convention and Protocol Relating to the Status of Refugees*, Jan. 30, 1967, 606 U.N.T.S. 267.

115. U.N. General Assembly, *Convention and Protocol Relating to the Status of Refugees*, Jan. 30, 1967, 606 U.N.T.S. 267, art. 1.2.

116. Kara K. Moberg, *Extending Refugee Definitions to Cover Environmentally Displaced Persons Displaces Necessary Protection*, 94 IOWA L. REV. 1107, 1121 (2009); see also Pierre-François Mercure, *À la recherche d'un statut juridique pour les migrants environnementaux transfrontaliers: la problématique de la notion de réfugié*, 37 R.D.U.S. 1, 13 (2006).

Since the origin of the Refugee Convention, the cause of displacement has been understood as “deriv[ing] from the relations between the State and its nationals.”¹¹⁷ The UNHCR later confirmed that “[p]ersecution is normally related to action by the authorities of a country,”¹¹⁸ either because national authorities persecute someone or because they let someone be persecuted. The requirement that a person be deprived of their fundamental rights because of national authorities was actually intended to exclude climate migrants from the protective status of refugees. According to Hong, “[t]he development of refugee law, as evidenced by legislative history and interpretative guides, indicates that the drafters recognized natural calamities as major causes of human migration and purposefully declined to extend refugee status to the victims of such events.”¹¹⁹ Thus, “[e]nvironmental factors that cause movements across international borders are not grounds, *in and of themselves*, for the grant of refugee status”¹²⁰ under international law. According to the UNHCR Handbook, by indicating persecution as a specific motive, the convention “automatically makes all other reasons for escape irrelevant to the definition” and “rules out such persons as victims of famine or natural disaster, unless they also have well-founded fear of persecution.”¹²¹

However, refugee law may provide some protection to climate migrants in two cases. First, refugees may accidentally fall within the Convention’s definition of “refugee.” It seems difficult to imagine that consequences of climate change might be considered a form of persecution committed by polluting states, as the causal and purposeful relation between one country’s pollution and some local disaster would be very difficult to establish. Responsibility for climate change is collective, and “no individual government is primarily at fault.”¹²² But the “source-of-persecution” requirement could be fulfilled if a government has not been willing to reduce the known vulnerability of a particular group to climatic phenomena. For instance, a national policy

117. Jeanhee Hong, *Refugees of the 21st Century: Environmental Injustice*, 10 CORNELL J.L. & PUB. POL’Y 323, 331 (2001) (citing JACQUES VERNANT, *THE REFUGEE IN THE POST-WAR WORLD* 5–7 (1953)).

118. UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES, *HANDBOOK ON PROCEDURES AND CRITERIA FOR DETERMINING REFUGEE STATUS UNDER THE 1951 CONVENTION AND THE 1967 PROTOCOL RELATING TO THE STATUS OF REFUGEES* ¶ 65 (1979), available at <http://www.unhcr.org/refworld/pdfid/3ae6b3314.pdf> [hereinafter UNHCR Handbook].

119. Hong, *supra* note 117, at 332.

120. IASC, *supra* note 102, at 4.

121. UNHCR Handbook, *supra* note 118, ¶ 39.

122. Jessica B. Cooper, *Environmental Refugees: Meeting the Requirements of the Refugee Definition*, 6 N.Y.U. ENVTL. L.J. 480, 513 (1998).

that prevents any internal displacement of endangered populations or mistreats those who move from an endangered location could be qualified as “persecution,” entitling some climate migrants to refugee protection. This would also be the case if a government excluded a minority from any protection in face of a natural catastrophe, as the minority members who would be discriminated against might be considered to be suffering from persecution by the government. Alternatively, preventing the provision of international humanitarian assistance to the victims of a climate process may be considered a form of persecution. Thus, when a state is unwilling to protect any part of its population against the consequences of climate change, people “seeking refuge from the resulting environmental degradation are effectively seeking refuge from their government as well.”¹²³

A second hypothesis under which climate migrants can be entitled to refugee protection relates to subsidiary protection. Two pioneer states, Finland and Sweden, have adopted legislation granting such subsidiary protection for anyone who left their country and who “is unable to return to the country of origin because of an environmental disaster.”¹²⁴ Nonetheless, the Scandinavian subsidiary protection of “environmental refugees,” including some climate migrants, is the exception to the rule; climate migrants are generally not entitled to refugee protection.

2. *Insufficiency of Statelessness*

The international legal regime for the protection of stateless persons and the reduction of the cases of statelessness¹²⁵ might be applicable to some climate migrants, even though there are many uncertainties as to how this concept might apply. The first issue relates to the very nature of statehood. To be recognized, a state must have a territory, a population, and a government. However, it is uncertain whether these conditions must be respected continuously *after* a state has been recognized.¹²⁶ Most likely, a state cannot be maintained if an element disappears on a permanent basis.

Another issue is whether the territory requirement for statehood

123. *Id.* at 502.

124. SWEDISH ALIENS ACT, ch. 2, § 4 (SFS 2005:716) (Swed.), available at <http://www.sweden.gov.se/content/1/c6/06/61/22/bfb61014.pdf> (official translation); see also Finnish Aliens Act, § 88a(1), 301/2004, available at <http://www.finlex.fi/en/laki/kaannokset/2004/en20040301.pdf>.

125. For a general presentation of statelessness under international law, see LAURA VAN WAAS, NATIONALITY MATTERS: STATELESSNESS UNDER INTERNATIONAL LAW (2008).

126. Jane McAdam, ‘Disappearing States’, *Statelessness and the Boundaries of International Law*, 6–7 (University of New South Wales Faculty of Law Research Series No. 2, 2010), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1539766.

would be met when land territories emerge. This does not seem to be the case in the United Nations Convention on the Law of the Sea, which considers territorial waters as the accessory of land territory and recognizes territorial waters only to inhabited, natural islands.¹²⁷ However, these provisions “rest on the assumption that there will not be a significant rise in sea-level,”¹²⁸ and may therefore be inapplicable. Yamamoto and Esteban suggest that the concept of a “deterritorialized state” may “become a special type of international entity that would allow these Island States to survive in some form the disappearance of their territory.”¹²⁹ Yet, even in a worst-case scenario, the land territory of Pacific islands, such as the Maldives, is not likely to be entirely submerged before the end of the century; however, it will become uninhabitable long before being submerged.¹³⁰ Then, the “population element” of statehood would be challenged long before its “territorial” element. Eventually, the existence of a state is not defined by international conventions or institutions, but assessed by other states. Then, the continuing existence of the Maldives or other “sinking” islands depends primarily on political decisions.¹³¹

Statelessness is obviously a more secure status than the nationality of an uninhabitable country. However, international law does not provide stateless persons with a plethora of rights, and, in particular, does not provide the right to enter a territory. The Convention relating to the Status of Stateless Persons, ratified by sixty-six States,¹³² prohibits expulsion of stateless persons except on grounds of national security or public order, but under the condition of lawful stay on the territory,¹³³ whereas political refugees protected by the Convention Relating to the Status of Refugees cannot be sanctioned for their illegal entrance into a

127. United Nations Convention on the Law of the Sea, art. 121, paras. 1–3, art. 60 para. 8, Dec. 10, 1982, 1833 U.N.T.S. 3973.

128. David D. Caron, *When Law Makes Climate Change Worse: Rethinking the Law of Baselines in Light of a Rising Sea Level*, 17 *ECOLOGICAL L.Q.* 621, 622 (1990).

129. Lilian Yamamoto & Miguel Esteban, *Vanishing Island States and Sovereignty*, 53 *OCEAN & COASTAL MANAGEMENT* 1, 8 (2010).

130. In this sense, see McAdam, *supra* note 126, at 2; see also The United Nations High Commissioner for Refugees [UNHCR], *Climate Change and Statelessness: an Overview*, 2, *Submission to the 6th Session of the Ad Hoc Working Group on Long-Term Cooperative Action (AWG-LCA 6) under the UNFCCC*, June 1–12, 2009, <http://unfccc.int/resource/docs/2009/smsn/igo/048.pdf>.

131. McAdam, *supra* note 126, at 12.

132. Convention relating to the Status of Stateless Persons, Sept. 28, 1954, 360 U.N.T.S. 117, available at <http://treaties.un.org/doc/Publication/UNTS/Volume%20360/volume-360-I-5158-English.pdf>.

133. *Id.*, art. 31.

state's territory.¹³⁴ However, the notion of a *reduction* of statelessness may give stateless climate migrants an argument for naturalization. The Preamble of the Convention on the Reduction of Statelessness provided in a weak language that it is "desirable to reduce statelessness by international agreement."¹³⁵ A similar claim could be based on Article 15 of the Universal Declaration of Human Rights, providing that "[e]veryone has the right to a nationality," but this right has also remained of a doubtful legal nature.¹³⁶ Then, the requirement to reduce statelessness or the universal right to a nationality may constitute good political arguments, but probably not legal ones.

3. *The Absence of International Protection of Migrants Rights*

Climate migrants can hardly invoke their status as "migrants," as international law does not provide much protection to migrants. The International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families does not provide any right to cross borders.¹³⁷ Neither the International Labour Organization conventions,¹³⁸ nor the UNGA's Declaration on the Human Rights of Individuals Who Are Not Nationals of the Country in Which They Live give migrants any rights to move to or to stay.¹³⁹ These international instruments mainly recall internationally recognized human rights in the specific case of migrant workers or aliens, and their low rate of

134. Convention Relating to the Status of Refugees, *supra* note 114, art. 31.

135. Convention on the Reduction of Statelessness, second recital, Aug. 30, 1961, 989 U.N.T.S. 175, *available at* <http://treaties.un.org/doc/Publication/UNTS/Volume%20989/volume-989-I-14458-English.pdf>.

136. Universal Declaration of Human Rights, GA Res. 217(III), art. 15, para. 1, U.N. Doc. A/810 (Dec. 10, 1948), *available at* <http://www.un.org/en/documents/udhr/>. The right to a nationality has not been recognized as such by the International Covenant on Civil and Political Rights. Human Rights were originally conceived in order to protect citizens from their (own) state and therefore do not easily apply to stateless persons.

137. *See* International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families, Dec. 18, 1990, (entered into force July 1, 2003), *available at* <http://www2.ohchr.org/english/law/cmw.htm>.

138. *See* C97 Migration for Employment Convention (Revised), July 1, 1949, 120 U.N.T.S. 70; C143 Migrant Workers (Supplementary Provisions) Convention, June 24, 1975, 1120 U.N.T.S. 77.

139. *See* GA Res. 40/144, Document A/RES/40/144 (Dec. 13, 1985), *available at* <http://www.un.org/documents/ga/res/40/a40r144.htm>. Article 2, paragraph 1 clearly provides that "[n]othing in this Declaration shall be interpreted as legitimizing the illegal entry into and presence in a State of any alien, nor shall any provision be interpreted as restricting the right of any State to promulgate laws and regulations concerning the entry of aliens and the terms and conditions of their stay or to establish differences between nationals and aliens."

ratification shows that few states are actually keen to recognize and protect even basic human rights in the case of economic migrants.

Free from any international obligation, many states will select migrants so as to accept only qualified, working-age migrant workers. For instance, "[f]ollowing the Tuvaluan government's appeal for assistance with relocation in 2000, the New Zealand government created the Pacific Access Category (PAC) to enable seventy-five residents... from Tuvalu . . . to migrate each year," but "applicants must be eighteen to forty-five, have an 'acceptable' offer of employment and meet a minimum English language requirement."¹⁴⁰ Yet, the migration opportunities obviously do not bring an appropriate answer to the necessity that *all* climate migrants be given a new place to live in dignity and may even "disrupt production systems and undermine . . . domestic markets" in the country of origin.¹⁴¹ It is fundamental that no one be left behind on an isolated island against their will, and economic migration does not generally give any satisfactory answer to this requirement.

4. Lack of Efficiency of International Human Rights Law

A last potential source of international legal protection for climate migrants might be found in international human rights law.¹⁴² Obviously, submersion of one's entire country, flooding, desertification, or a significant increase of natural hazards have consequences on fundamental, widely recognized rights such as the right to life, but also economic and social rights and possibly third generation human rights, such as the right to security.¹⁴³ However, if climate migrants' rights are well established, there are obstacles to the identification of the corollary duty holders. Under international human rights law, a state has the responsibility to protect the fundamental rights of its citizens and any other person within its jurisdiction.¹⁴⁴ States do not have any human rights obligations to other countries' citizens who are not under their

140. Brindal, *supra* note 110, at 241.

141. BROWN, *supra* note 22, at 32.

142. See generally C.W. WOUTERS, INTERNATIONAL LEGAL STANDARDS FOR THE PROTECTION FROM REFOULEMENT (2009).

143. For a human rights analysis of climate migration, see, e.g., Benoit Mayer, *International Law and Climate Migrants: A Human Rights Perspective* (CISDL-IDLO joint working paper series on sustainable development law on climate change, March 2011), available at http://www.idlo.int/Publications/8_MayerBenoit_InternationalLawandClimateMigrants.pdf.

144. In this context, "jurisdiction" is to be understood as a synonym of "control." See Marko Milanovic, *From Compromise to Principle: Clarifying the Concept of State Jurisdiction in Human Rights Treaties*, 8 H.R. L. REV. 411, 435-36 (2008).

jurisdiction, understood as “effective control.”¹⁴⁵ In the *Bankovic* case, the European Court of Human Rights concluded that state-parties of NATO did not have effective control over the victims whom they were bombing in Sarajevo, and therefore the Convention did not apply.¹⁴⁶ Even if a state has, or should have, effective control over its level of greenhouse gas emissions, it surely does not have control over the remote consequences of climate change on the other side of the world, several decades later.¹⁴⁷

If human rights can obviously serve as a *justification* for the international community’s moral and political responsibility to intervene, it does not by itself create any pre-departure right that climate migrants could invoke vis-à-vis third-party states, such as a right to migrate. Legally unprotected climate migrants would be turned back by “host” countries with even less hesitation than asylum-seekers are turned away. However, if climate migrants eventually manage to move to a new country, either legally or illegally, they should be allowed to invoke fundamental rights against the state that has effective control over them. For instance, this could lead to a prohibition against the expulsion of a climate migrant based on, for example, the Convention Against Torture.¹⁴⁸ The Human Rights Committee stated that “state parties [to the ICCPR] must not expose individuals to the danger of torture, cruel, inhuman, or degrading treatment or punishment upon return to another

145. See, e.g., U.N. Human Rights Comm., *General Comment No. 31: Nature of the General Legal Obligation Imposed on States Parties to the Covenant*, § 10, U.N. Doc. CCPR/C/21/Rev.1/Add.13 (March 29, 2004), available at [http://www.unhcr.ch/tbs/doc.nsf/\(Symbol\)/CCPR.C.21.Rev.1.Add.13.En?Opendocument](http://www.unhcr.ch/tbs/doc.nsf/(Symbol)/CCPR.C.21.Rev.1.Add.13.En?Opendocument); *Saldano v. Argentina*, Petition, Inter-Am. Comm’n H.R., Report No. 38/99, OEA/Ser.L/V/II.102, doc. 6 rev. ¶¶ 17–19 (1999).

146. *Bankovic et al. v. Belgium*, 2001-XII Eur.Ct. H.R.333 ¶¶ 50–58.

147. A condition of “jurisdiction” or “effective control” is more restrictive than a condition of causal link, which would be implemented in litigations on polluters’ tort responsibility.

148. Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, art. 3.1, December 10, 1984, 1465 U.N.T.S. 85 (“No State Party shall expel, return (refouler) or extradite a person to another State where there are substantial grounds for believing that he would be in danger of being subjected to torture.”). This convention adopts a very broad definition of torture as “any act by which severe pain or suffering, whether physical or mental, is intentionally inflicted on a person for such purposes as obtaining from him, or a third person, information or a confession, punishing him for an act he or a third person has committed or is suspected of having committed, or intimidating or coercing him or a third person, or for any reason based on discrimination of any kind, when such pain or suffering is inflicted by or at the instigation of or with the consent or acquiescence of a public official or other person acting in an official capacity.” *Id.*, art. 1.

country by way of their extradition, expulsion or *refoulement*.”¹⁴⁹ The European Court of Human Rights adopted a similar position in *Soering v. The United Kingdom*.¹⁵⁰ Yet it is likely that many states will not accept the full dimension of their obligation to protect fundamental rights under international human rights law, especially if climate migrants have crossed the border illegally. Abuses may be frequent, while litigation under international human rights law would be extremely long and difficult.¹⁵¹ Therefore, international human rights law is too vague and leaves too much room for national “interpretation” to provide quick and efficient protection of climate migrants. On the other hand, international human rights are likely to develop, thanks to the issue of climate-induced migration, through new jurisprudence and instruments.

III. CONCEIVING AN INTERNATIONAL LEGAL FRAMEWORK ON CLIMATE CHANGE-INDUCED MIGRATION

As argued in Part II, a new international legal framework on climate-induced migration should be created. Part III will describe the picture of such a framework, first through identifying guiding principles that an international legal framework on climate change-induced migration should respect (Subpart A) and then by imagining a realistic path to implement this legal framework (Subpart B).

A. Imagining: Guiding Principles for an International Legal Framework

This Subpart identifies five guiding principles that such an international legal regime should respect: (1) an early and sustainable response; (2) respect for individual and collective rights; (3) a global approach to climate change migration; (4) burden-sharing; and (5) subsidiarity.

149. U.N. Human Rights Comm., *General Comment No. 20: Prohibition of Torture, or Other Cruel, Inhuman or Degrading Treatment or Punishment*, art. 7, § 9, Mar. 10, 1992, available at [http://www.unhchr.ch/tbs/doc.nsf/\(Symbol\)/6924291970754969c12563ed004c8ae5?Opendocument](http://www.unhchr.ch/tbs/doc.nsf/(Symbol)/6924291970754969c12563ed004c8ae5?Opendocument); see generally WOUTERS, *supra* note 142, at 359.

150. *Soering v. United Kingdom*, XI Eur. Ct. H.R. (Ser.A) at 439 (1989); see generally WOUTERS, *supra* note 142, at 187; Moor & Cliquet, *supra* note 113, at 7.

151. In this sense: Moberg, *supra* note 116, at 1117.

1. When? The Principle of an Early and Sustainable Response

Members of the international community are likely to bury their “heads in the sands,”¹⁵² waiting for a tragic catastrophe to happen before even recognizing the reality of climate change-induced migration. A cynic may wonder how many people need to die for the world to open its eyes. In the Ganges Delta, the most recent major storm surge in 2007 killed 4,000 people, in addition to 140,000 who died in 1991.¹⁵³ In 2008, Cyclone Nargis caused more than 145,000 deaths in the Irrawaddy Delta in Burma.¹⁵⁴ In every such instance, hundreds of thousands, or millions, of people are displaced, and many of them remain homeless.¹⁵⁵ In comparison, widespread images of a storm surge touching a small, would-be paradisiacal island, with a possible second disaster in the near future, may then have a greater influence on public opinion. This may lead to emergency evacuation and an international resettlement program announced by governments in prime time.

Yet, unlike political asylum claims, climate change migration can be foreseen well in advance. Even though nobody can guess when a climate event will suddenly force people to migrate from their homes, the growing probabilities of such an event are established.¹⁵⁶ The international community should take advantage of the foreseeable character of climate migrations and adopt a response to climate change migration as early as possible in order to mitigate the harm produced by climate change, reduce the potential cost, and adopt sustainable solutions.¹⁵⁷ Thus, a “planned and voluntary resettlement and reintegration of affected populations over periods of many years and decades” should be preferred to “mere emergency response and disaster relief.”¹⁵⁸ Short-term in situ adaptation should be pursued only with due

152. BROWN, *supra* note 22, at 36.

153. Andrew C. Revkin, *The Dangers of the Deltas*, N.Y. TIMES, May 11, 2008, available at <http://www.nytimes.com/2008/05/11/weekinreview/11revkin.html?scp=7&sq=Cyclone+Sidr+&st=nyt>.

154. *Id.*

155. Joanna Kakissis, *Environmental Refugees Unable to Return Home*, N.Y. TIMES, Jan. 3, 2010, available at <http://www.nytimes.com/2010/01/04/world/asia/04migrants.html>.

156. *See*, Myers, *supra* note 47.

157. *See generally*, Frank Biermann & Ingrid Boas, *Preparing for a Warmer World: Towards a Global Governance System to Protect Climate Refugees*, 10 GLOBAL ENVTL. POL. 60, 75 (2010) (arguing in favor of a “Principle of Planned Re-location and Resettlement” and a further “Principle of Resettlement Instead of Temporary Asylum”).

158. Frank Biermann & Ingrid Boas, *Protecting Climate Refugees: The Case for a Global Protocol*, 50 ENVTL. 8, 12 (2008) [hereinafter Biermann & Boas, *Protecting Climate Refugees*].

consideration to a longer-term solution, which may imply resettlement.¹⁵⁹ The risk is that false promises of in situ adaptation give the international community an excuse to avoid considering the necessity of resettlement and allows the world to simply wait for a catastrophe.

A good response to climate change migration should not only be found early, it should also be a sustainable solution that prevents any further catastrophe. When someone leaves an immersed land or is pushed away by desertification, there is little to no hope that this land will become inhabitable again in that person's lifetime. Like economic migrants, there is a risk that climate migrants would be admitted to asylum countries only when the country of destination can take advantage from them "to free the citizens from hard and unpleasant work."¹⁶⁰ To avoid such a situation, climate migrants should be "seen and treated as permanent immigrants"¹⁶¹ from the outset and be entitled to the same rights as citizens. Substantive equality of climate migrants in the enjoyment of their rights may require particular forms of action given the difference of their situation. For example, climate migrants may require language education or assistance in finding a job. More particularly, Locke underlines that "[d]uring and after relocation, psychological trauma will no doubt be severe" and that "[r]elocation methods must take this into account."¹⁶² Eventually, the permanent character of climate change-induced migration reflects the fact that the environmental causes of climate migration are themselves permanent, whereas a political change may stop the persecution of political refugees at their place of origin.

All in all, resettlement sustainability means that climate migrants should be given a stable and permanent status, entitling them to certain forms of protection. Indeed, if climate migrants are likely to live the rest of their life in a host country, there is no reason why they should not be naturalized. Naturalization would be the best way to ensure that climate migrants are not exploited after their migration and to guarantee "political justice."¹⁶³ However, the automatic naturalization of all climate migrants is utopian, as states may be reluctant to accept any international legal breakthrough in the sovereign and sacrosanct prerogative of granting nationality.¹⁶⁴ In addition, assimilation may also impede climate

159. See, e.g., Kelman, *supra* note 16.

160. MICHAEL WALZER, SPHERES OF JUSTICE: A DEFENSE OF PLURALISM AND EQUALITY 3, 52 (1983).

161. Biermann & Boas, *supra* note 158, at 12.

162. Justin T. Locke, *Climate Change-Induced Migration in the Pacific Region: Sudden Crisis and Long-Term Developments*, 175 GEOGRAPHICAL J. 171, 177 (2009).

163. WALZER, *supra* note 160, at 59.

164. See, e.g., YAFFA ZILBERSHATS, THE HUMAN RIGHT TO CITIZENSHIP 7 (2002) ("It

migrants' collective identity, and resettlement in itself may be perceived as a major cultural loss.¹⁶⁵

2. *What to Protect? The Principle of the Protection of Individual and Collective Rights*

A second guiding principle is that an international legal framework on climate-induced migration should recognize both *individual* rights and *collective* rights. The framework should leave no doubt that "[r]espect for human rights must be an integral part of any policy response to the migration and displacement consequences of climate change, no matter how the motivations for movement are defined."¹⁶⁶ Yet, individuals do not live alone; belonging to communities is a human need on economic, social, and political levels. Thus, one may consider that "if certain individual moral rights exist, then certain collective moral rights also exist," for "[c]ertain individual rights . . . cannot be separated from collective rights."¹⁶⁷ The Human Rights Committee recognized that "the right of self-determination is of particular importance because its realization is an essential condition for the effective guarantee and observance of individual human rights and for the promotion and strengthening of those rights."¹⁶⁸ In addition, cultural rights include the right to take part in "cultural life,"¹⁶⁹ which certainly requires a form of collective identity.

An international legal framework dealing with climate-induced migration must reconcile the protection of a displaced groups' collective identity with the fundamental rights of each individual, which might be a

is commonly accepted that issues of citizenship are outside the reach of international law and are dealt with by states in accordance with their respective domestic legal system. . . . State sovereignty is primarily understood to entail the power to determine who will be the permanent and preferred members of the State, or, put differently, who will be its citizens.").

165. See, e.g., Ielemia, *supra* note 78.

166. Philippe Boncour & Bruce Burson, *Climate Change and Migration in the South Pacific Region: Policy Perspectives*, in CLIMATE CHANGE AND MIGRATION: SOUTH PACIFIC PERSPECTIVES 5, 19 (Bruce Burson ed., 2010).

167. Dwight G. Newman, *Collective Interests and Collective Rights*, 49 AM. J. JURIS. 127, 158, 162 (2004).

168. U.N. Human Rights Comm., *General Comment No. 12: The Right to Self-Determination of Peoples*, art. 1, § 1, (Mar. 13, 1984) available at <http://www.unhchr.ch/tbs/doc.nsf/0/f3c99406d528f37fc12563ed004960b4?Opendocument>.

169. See The International Covenant on Economic, Social and Cultural Rights, Dec. 16, 1966, 993 U.N.T.S. 3, art. 15, § 1, available at <http://www2.ohchr.org/english/law/cescr.htm> ("The States Parties to the present Covenant recognize the right of everyone [. . .] [t]o take part in cultural life.").

very difficult task.¹⁷⁰ Individual economic migration under today's national regimes would tend to leave unproductive people behind and destroy the community's social structure. It has, for instance, been argued that "[r]elaxing immigration rules as part of a concerted policy to 'release the population pressure' in areas affected by climate change could accelerate the brain drain of talented individuals from the developing world to the developed—and worsen the 'hollowing out' of affected economies, which is itself a driver of migration."¹⁷¹ Large-scale resettlement programs could also have dramatic consequences, as "moving people out of established social networks threatens their livelihoods and contributes to a sense of isolation."¹⁷² A collective resettlement, rather than individual migration, may reduce this destruction of the social network. Eventually, the cultural rights of climate migrants would be nullified if they had to "abandon their identity and their community and integrate elsewhere."¹⁷³

Biermann and Boas argue for a climate migrant regime to be "tailored not to the needs of individually persecuted people (as in the current UN refugee regime) but of entire groups of people, such as populations of villages, cities, provinces, or even entire nations, as in the case of small island states."¹⁷⁴ An international collective resettlement program may be a solution not only in the extreme case of an island state immersion, but also when population density reaches a tolerance threshold resulting from climate-induced internal displacements.¹⁷⁵ An interesting option would be to grant "migrants" sovereignty in their new settlement,¹⁷⁶ either through cession or lease of territory, as it would fully allow migrants to maintain their national identity. Such an option has been considered by Tuvalu and the Maldives without much success, because New Zealand and Australia are opposed to any cession of territory or any specific migration program.¹⁷⁷

On the other hand, a purely collective treatment of climate migrants would undermine individual rights. Each climate migrant may have

170. See generally, Jean Rivero, *Les droits de l'homme : droits individuels ou droits collectifs?*, in *LES DROITS DE L'HOMME : DROITS COLLECTIFS OU DROITS INDIVIDUELS?* 23, 23 (Alain Fenet ed., 1982).

171. BROWN, *supra* note 22, at 40.

172. WARNER ET AL., *supra* note 27, at 2:15.

173. Kelman, *supra* note 16, at 20 (noting that "[t]he 12,000 Tuvaluans still on Tuvalu, for example, could easily disperse among the millions of Sydney, Tokyo, Los Angeles or other large cities").

174. Biermann & Boas, *supra* note 158, at 12.

175. See generally, *supra* note 1.

176. UNHCR, *supra* note 130, at 2.

177. See Locke, *supra* note 162, at 177–78.

different expectations abroad. According to Locke, for instance, “[y]oung unemployed islanders with few educational or economic opportunities at home may benefit from access to educational facilities, the job market and perhaps the greater freedom available in developed countries,” whereas “older Pacific islanders, and those who unwillingly relocate, may be the losers if forced to migrate.”¹⁷⁸ This may lead to different attitudes toward resettlement, which all ideally should be taken into account. Mortreux and Barnett show that “[p]eople in Funafuti [the main atoll of Tuvalu] wish to remain living in Funafuti for reasons of lifestyle, culture and identity.”¹⁷⁹ Any collective resettlement would require a collective decision. A democratic decision-making process that would allow an effective, early, and collective resettlement decision to be taken will need to be invented.¹⁸⁰ In general, collective resettlement leads to very difficult issues relating to the respect of minorities in the exercise of collective rights. For instance, how would elders who want to finish their lives on “their” island be dealt with if everyone else wants to leave?

3. *What to Decide? The Principle of a Global Approach of Climate Change Migration*

A third guiding principle is that the adopted approach should be global in its geographical and material scope. Climate change is a global phenomenon that should lead to a global solution, as the largest greenhouse gas emitters are often far from affected countries, and instability in one region of the world can bring insecurity to remote countries.¹⁸¹ Adopting a global approach to climate change migration is an equity requirement as it ensures that those states responsible for climate change pay for its consequences; but it is also an efficiency requirement as it includes both developed countries of the global North together with affected countries, mostly of the global South. This also implies that an international framework on climate-induced migration cannot completely evade the issue of climate-induced *internal*

178. *Id.* at 178.

179. Colette Mortreux & Jon Barnett, *Climate Change, Migration and Adaptation in Funafuti, Tuvalu*, 19 GLOBAL ENV'T'L CHANGE 105, 105 (2009).

180. The Alaskan indigenous community of Kivalina gives a first example of such a democratic decision making. Referendums on a resettlement of the village, threatened by erosion, were rejected in 1953 and again in 1963. Yet another referendum was held in 1992, where 72 voted for a resettlement and only 7 against. See Kivalinacity.com, *Relocation*, <http://www.kivalinacity.com/kivalinarelocation.html> (last visited June 21, 2011). Yet, such a procedure results in imposing the decision of a majority upon a minority: those seven persons who voted against resettlement will surely have no choice but to move with the others. On the other hand, unanimous decisions are unlikely.

181. See *supra* note 97.

displacements. Granting asylum only to those who cannot be protected in their home country might, in extreme circumstances, create an incentive for suboptimal domestic decisions not to take adaptive measures for the purpose of "getting rid" of vulnerable populations. A genuinely global approach toward climate-related migration would push the actors to balance the costs and benefits of international displacement and in situ adaptation. Furthermore, a global approach toward climate change migration should also be coordinated with climate change mitigation policies. This may open the path to national contributions to an international fund that is indexed on the level of emissions of greenhouse gases and/or on the reduction of these emissions.

4. With Whose Resources? The Principle of Common but Differentiated Responsibility

A fourth guiding principle is that costs should be split between states on a fair basis. But what is a fair basis? Reflecting a widespread claim in the developing world, the Ethiopian Prime Minister Meles Zenawi stated "those who did the damage will have to pay."¹⁸² A solution could be found in the Principle of Common but Differentiated Responsibility ("PCDR"), recognized in the 1992 *Rio Declaration on Environment and Development*¹⁸³ and in the UNFCCC.¹⁸⁴ The PCDR demands that states address the consequences of climate change together, while still differentiating between states in different situations.¹⁸⁵ Thus, it "fosters partnership and cooperation among states" and "promotes effective implementation of agreements"¹⁸⁶ through more acceptable, capacities-tailored agreements. An application of the PCDR is the requirement that "[t]he special situation and needs of developing countries, particularly the least-developed and those most environmentally vulnerable, shall be given special priority," so that "[i]nternational actions in the field of environment and development . . . address the interests and needs of all countries."¹⁸⁷ The authority of the

182. *Migration and Climate Change: A New (Under) Class of Travellers*, THE ECONOMIST, June 25, 2009.

183. United Nations Conference on Environment and Development, Rio De Janeiro, Braz., June 3–14, 1992, *Rio Declaration on Environment and Development*, vol. I, princ. 7, U.N. Doc. A/CONF.151/26, (June 14, 1992) available at <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm> (hereinafter "Rio Declaration on Environment and Development").

184. U.N. Framework Convention on Climate Change, *supra* note 86, art. 3, § 1.

185. LAVANYA RAJAMANI, DIFFERENTIAL TREATMENT IN INTERNATIONAL ENVIRONMENTAL LAW 137 (2006).

186. FRIEDRICH SOLTAU, FAIRNESS IN INTERNATIONAL CLIMATE CHANGE LAW AND POLICY 186 (2009).

187. Rio Declaration on Environment and Development, *supra* note 183, princ. 6.

PCDR is strengthened since “[g]rowing evidence of state practice supports the view that [it] is a principle of international environmental law.”¹⁸⁸

There are two alternative interpretations of the PCDR: whether differentiation of responsibility may be based either on historical emissions, or on financial capabilities.¹⁸⁹ An emissions-based PCDR is similar to the “Polluter-Pays Principle,” recognized as a principle of domestic governance,¹⁹⁰ and it may act as an incentive to reduce pollution.¹⁹¹ In contrast, a financial capacity-based PCDR would lead to a justification such as solidarity or generosity, thus weakening the moral sense implied by the notion of “responsibility.”¹⁹² During the negotiations of the UNFCCC, developed countries accepted a higher responsibility justified by financial capacities, but rejected any idea of

188. SOLTAU, *supra* note 186, at 189.

189. See, for instance, the contradiction between the reference to “historical responsibility” and the designation of “developed countries” in, UNFCCC, *Decision 1/CP.16: The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention*, 2, recitals before § 36, U.N. Doc. FCCC/CP/2010/7/Add.1 (2010) (“owing to [their] historical responsibility, developed country Parties must take the lead in combating climate change and the adverse effects thereof.”).

190. Rio Declaration on Environment and Development, *supra* note 183, princ. 16 (“National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment.”).

191. The “Polluter Pays Principle” intends to internalize the negative environmental consequences of an activity in the cost of this activity. See, e.g., Guiding Principles Concerning the International Economic Aspects of Environmental Policies of the Organization for Economic Co-Operation and Development (OECD), adopted in *Recommendation of the Council on Guiding Principles Concerning International Economic Aspects of Environmental Policies*, ¶ 4, Doc. C(72)128, (May 26, 1972), available at <http://webnet.oecd.org/oecdacts/Instruments/ShowInstrumentView.aspx?InstrumentID=4&Lang=en&Book=False> (“The principle to be used for allocating costs of pollution prevention and control measures to encourage rational use of scarce environmental resources and to avoid distortions in international trade and investment is the so-called ‘Polluter-Pays Principle.’ This principle means that the polluter should bear the expenses of carrying out the above-mentioned measures decided by public authorities to ensure that the environment is in an acceptable state. In other words, the cost of these measures should be reflected in the cost of goods and services that cause pollution in production and/or consumption. Such measures should not be accompanied by subsidies that would create significant distortions in international trade and investment.”); see also Sanford E. Gaines, *Polluter-Pays Principle: From Economic Equity to Environmental Ethos*, 26 TEXAS INT’L L.J. 463, 469 (1991).

192. For an extensive discussion of the distinction between capacity-based and responsibility-based PCDR, see Mayer, *supra* note 85, at 24–27.

“culpability.”¹⁹³ For instance, the United States has consistently underscored that it “does not accept any interpretation of [the PCDR] 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.”¹⁹⁴ This disagreement may seem of little practical consequence since “rich” countries are usually those who historically have contributed the most to greenhouse gas emissions.

The financial capacity-based interpretation, being voluntary by nature (rich states accepting to offer assistance), deeply differs from the integral reparation due under a “polluter-pays principle”-like rule. This latter option could open the way to litigation, because, referring to the *Draft Articles on Responsibility of States for Internationally Wrongful Acts*: the injured states would be allowed to demand the “cessation of the wrongful act” and would be “entitled to obtain from the state which has committed an internationally wrongful act full reparation in the form of restitution, in-kind compensation, satisfaction and assurances and guarantees of non-repetition, either singly or in combination.”¹⁹⁵ Based on the other interpretation of the PCDR, states may argue that their responsibility is of a purely moral nature and that it has been mentioned in international instruments only as a mere explanation for specific financial mechanisms.¹⁹⁶ Therefore, the prevalence of either interpretation of the PCDR may have important consequences concerning the nature and the scope of the international community’s commitment.

Questions also arise concerning the concrete meaning of the PCDR. Even if opening Western borders to climate migrants is an option, it is unlikely that most climate migrants will want to go to a completely different environment. For instance, most Bangladeshis will naturally want to go to India, and the Tuvalu will try to resettle on other Pacific islands or in Australia rather than in the suburbs of American or

193. Daniel Bodansky, *United Nations Framework Convention on Climate Change: A Commentary*, 8 YALE J. INT’L L. 451, 503 (1993).

194. U.N. Conference on Environment and Development, *Report of the UN Conference on Environment and Development*, ch. IV, § 16 U.N. Doc. A/CONF.151/26(vol. IV), available at <http://www.un.org/documents/ga/conf151/aconf15126-4.htm>.

195. International Law Commission, *Report on its 53rd Working Session*, arts. 41 & 42, § 1, U.N. Doc. A/56/10, available at <http://untreaty.un.org/ilc/reports/2001/2001report.htm>.

196. For a presentation of the adaptation financial mechanisms established by the UNFCCC, see, e.g., Karoline Hægstad Flåm & Jon Birger Skjærseth, *Does adequate Financing Exist for Adaptation in Developing Countries?*, 9 CLIMATE POL’Y 109, 110–11 (2009).

European cities.¹⁹⁷ As such, other actions should be taken by Western governments such as “financing, supporting, and facilitating the protection and resettlement of climate refugees.”¹⁹⁸ Developing countries that are neighboring affected areas are likely to be the main destinations for climate migrants, and their capacity to resettle climate migrants should be taken into consideration. The UN Secretary-General emphasized that “[s]ocieties differ greatly in their capacity to manage population movements and assimilate migrants, and a capacity adequate to manage moderate and/or gradual flows may be overwhelmed by massive and/or sudden flows,” concluding that “[a]dequately planning for and managing environmentally induced migration will be critical.”¹⁹⁹ Eventually, compensation from developed countries to developing countries neighboring affected countries must be established to ensure fairness and successful resettlement.

197. See, e.g., Jane McAdam & Ben Saul, *Displacement with Dignity: International Law and Policy Responses to Climate Change Migration and Security in Bangladesh*, 53 GERMAN YEARBOOK OF INT'L L. 1 (2010) (arguing that climate migration in Bangladesh is and will mostly be internal); Afifi, *supra* note 1, at 21 (reporting that “rather than traveling to Europe, [Nigerian climate migrants] travel to other African countries (if they leave their own country in first place) where there are similar agricultural activities to theirs. These countries are mainly the Benin Republic, Cameroon, Chad, Ghana, Ivory Coast, Mali, Nigeria and Togo”); Francois Gemenne & Shawn Shen, *Tuvalu and New Zealand Case Study Report*, in ENVIRONMENTAL CHANGE AND FORCED MIGRATION SCENARIOS 2, 10–11 (2009), available at http://www.each-for.eu/documents/CSR_Tuvalu_090215.pdf, (reporting that Tuvaluan climate migrants mainly go to Fiji and New Zealand, but only exceptionally to Australia or the United States, mainly for cultural reasons); Mohamed Ait Hamzad, Brahim El Faskaoui & Alfons Fermin, *Migration and Environmental Change in Morocco: The Case of Rural Oases Villages in the Middle Drâa Valley*, in ENVIRONMENTAL CHANGE AND FORCED MIGRATION SCENARIOS 2, 12 (2009), available at http://www.each-for.eu/documents/CSR_Morocco_090328.pdf (showing that, even though international migration to Europe is frequent, “internal migration has always remained more important in numerical terms,” in particular concerning emigration from remote oases); Thomas Faist et al., *Environmental Factors in Mexican Migration: The Cases of Chiapas and Tlaxcala*, in ENVIRONMENTAL CHANGE AND FORCED MIGRATION SCENARIOS 2, 12 (2009), available at http://www.each-for.eu/documents/CSR_Mexico_090126.pdf (noting that Emigration from Mexico is overwhelmingly directed towards the United States (other international migration flows are close to insignificant) and strongly interlinked to the respective economic, social, and political conditions in both countries, Mexico and the United States, yet also recognizing (without quantifying) the development of internal migration. Even in cases of developing countries close to developed ones, where socio-economic “pulls” add to environmental “pushes,” social and cultural links with potential places of destination have a great importance).

198. Biermann & Boas, *supra* note 158, at 12.

199. U.N. Secretary-General, *supra* note 50, § 63.

5. *Who is in Charge? The Principle of Subsidiarity*

A fifth requirement is that decisions should be taken through a procedure that conforms to a principle of "subsidiarity." The principle of subsidiarity stems from the *Treaty on European Union*, where it is used as a principle of competence sharing between the Union and its member states.²⁰⁰ It provides that "the Union shall act only if and in so far as the objectives of the proposed action cannot be sufficiently achieved by the Member States . . . but can rather, by reason of the scale or effects of the proposed action, be better achieved at Union level."²⁰¹ In a very convincing article, Carozza argues that "[a]s in the European Union, in international law subsidiarity can be understood to be a conceptual alternative to the comparatively empty and unhelpful idea of state sovereignty,"²⁰² in particular to justify international human rights law. Similarly, this Article argues that an international legal framework on climate migrants would greatly benefit from an approach based on the principle of subsidiarity.

Carozza considers that, when applied to human rights, subsidiarity may be summarized in three elements. The first element is "that local communities be left to protect and respect the human dignity and freedom represented by the idea of human rights whenever they are able to achieve those ends on their own." Regarding climate-induced displacements, this would mean that victims of climate change should normally fall within the competence of the state on the territory of which they live. The second element is "the integration of local and supranational interpretation and implementation into a single community of discourse with respect to the common good that the idea of human rights represents." Similarly, a set of commonly accepted minimal standards should be recognized by the international community, including the principles of an early and sustainable response; consideration for individual and collective rights; a global approach; and common but differentiated responsibility. A third element of subsidiarity is that, "to the extent that local bodies cannot accomplish the ends of human rights without assistance, the larger communities of international society have a responsibility to intervene."²⁰³ Thus, the principle of subsidiarity may be interpreted to define the international community's duty to intervene upon the incapacity of the affected state to adapt in situ

200. See, e.g., J.L. CLERGERIE ET AL., *L'UNION EUROPÉENNE* 239 (6th ed. 2006).

201. Consolidated Version of the Treaty on European Union, art. 5, §§ 1, 3, Mar. 30, 2010, O.J. (C83) 15.

202. Paolo G. Carozza, *Subsidiarity as a Structural Principle of International Human Rights Law*, 97 AM. J. INT'L L. 38, 40 (2003).

203. *Id.* at 57–58.

or to resettle internally. It commands that the international intervention be as limited as possible: founding of an *in situ* adaptation scheme or an internal resettlement program should be preferred to international displacements of people.

However, adopting the principle of subsidiarity leads to two questions. A first procedural question is to determine who will implement the principle: assessing that one level of governance is unable to achieve a given goal (e.g. the protection of its population facing adverse environmental change) and that the upper level of governance should be in charge. In the EU context, the European Court of Justice, constituted by judges nominated by the member states, has competency to arbitrate between the authorities of the member states and those of the European Union.²⁰⁴ Such an international institution may be essential to the proper functioning of a subsidiarity-based framework.

Another substantive issue relates to the appropriate number of levels of governance. The subsidiarity principle was invented to share competences between only two levels of governance: the states and the European Union. Concerning climate change-induced migration, however, it could be argued that a regional level of governance should be encouraged between the international community and the states. Regional agreements may be easier to make than global ones, as few Western states are likely to welcome a significant number of new migrants. In contrast, in regional diplomatic forums, countries that already face increased illegal migration would be willing to help further a negotiated collective solution rather than unilaterally fence their borders.²⁰⁵ Regional negotiations have already been shown to be more able to foster ratification of conventions on the protection of refugees and human rights.²⁰⁶ Consequently, concerning climate migrants, it is likely that regional negotiations will result in more ambitious decisions than in universal ones.²⁰⁷

204. Consolidated Version of the Treaty on European Union, *supra* note 201, arts. 35, 220.

205. See, e.g., Lisa Friedman, *A Global 'National Security' Issue Lurks at Bangladesh's Border*, SCRIBD.COM (March 23, 2009), <http://www.scribd.com/doc/13651961/India-Fence-Along-Bangladesh> (reporting on India's ongoing project to fence more than 2,000 miles of its borders with Bangladesh in an attempt to prevent illegal migration).

206. See *in particular* Convention for the Protection of Human Rights and Fundamental Freedoms, Nov. 4, 1950, 213 U.N.T.S. 222; Convention Governing the Specific Aspects of Refugee Problems in Africa, Sept. 10, 1969, 1001 U.N.T.S. 45; American Convention on Human Rights, Nov. 22, 1969, O.A.S. Treaty Series No. 36, 1144 U.N.T.S. 123; African Charter on Human and People's Rights, June 27, 1981, 21 I.L.M. 58.

207. See Aurélie Sgro, *Towards Recognition of Environmental Refugees by the*

Nonetheless, regional governance may lead to fears that the treatment of climate migrants may differ from one region to another, and that burden-sharing would not be possible on the regional scale, since rich Western States would be separated from needy tropical ones. To prevent this from happening, a global normative and financial umbrella should be created to establish common minimal human rights standards and to ensure efficient burden-sharing at a global level. An independent international institution should also be in charge of providing independent scientific assessments on issues, such as the inhabitability of a region, in order to ensure the respect of common standards at the regional level through public reporting, and to diffuse the best practices observed in a country or a region. Eventually, the failure of regional protection should be considered. Under these circumstances, one could imagine a direct intervention of the international community.

*B. Back to the Reality: A Realistic Path for the Adoption
of an International Legal Framework*

Turning from theory to practice, this Subpart deals with the issue of determining the best media to set up a new international legal framework, which could be done through: (1) the action of existing institutions; (2) litigation; (3) international conventions; (4) international soft-law instruments; or (5) a combination of different modes of action.

1. Limited Discretion of Existing Institutions

First, stretching the competence of an existing institution would clearly be the easiest way to protect climate migrants. The UNHCR's extension of its jurisdiction to internally displaced persons provides a historical example.²⁰⁸ The UNHCR's original statute clearly delimited its jurisdiction to persons who are "outside the country of [their] nationality, or if [they] ha[ve] no nationality, the country of [their] former habitual residence."²⁰⁹ However, the UNGA adopted the statute of the UNHCR and retains the authority to modify it. Successive resolutions of the UNGA extended the UNHCR's authority to internally displaced persons "on the basis of specific requests from the Secretary-General or the competent principal organs of the United Nations and with the consent of

European Union, 6 ASYLON(S) (2008), available at <http://www.reseau-terra.eu/article844.html>.

208. See GUY S. GOODWIN-GILL & JANE MCADAM, THE REFUGEE IN INTERNATIONAL LAW 23 (2007).

209. G.A. Res. 428(V), art. 6(A)(ii), U.N. Doc. A/Res/428(V) (Dec. 14, 1950), available at <http://www.unhcr.org/refworld/docid/3ae6b3628.html>.

the concerned State.”²¹⁰ As a result, “[a]t the end of 2008, the UN refugee agency was caring for around 14.4 million of these IDPs, more than the total number of refugees of concern to UNHCR.”²¹¹

It may be tempting to imagine a similar initiative in the context of climate-induced migration, as a UNGA resolution may suffice to extend the jurisdiction of an existing agency of the United Nations to the protection of climate migrants or to create a new agency. A UNGA resolution may be quite difficult to obtain because it requires support by the “majority of the members present and voting,”²¹² but it is much easier than ratification of an international treaty. Alternatively, one may even argue that the UNHCR could do without a UNGA resolution, contenting itself with a reinterpretation of the definition of refugees so as to include climate migrants. Yet, the UNHCR cannot extend its mandate from the protection of nearly 25 million refugees and IDPs²¹³ to hundreds of millions of internal or international climate migrants without a profound reorganization. Of course, other existing institutions may also have a role to play in protecting climate migrants, such as the UNDP, the World Bank, the United Nations Environment Program (“UNEP”), and the UNFCCC. Cooperation among all of these institutions would be required in order for any efficient international framework to respect the requirement of a global approach.²¹⁴

Overall, an international organization’s initiative would face an insurmountable obstacle: the absence of commitment by third-party states. First, a unilateral initiative may lack financial resources. However, if the initiative were decided by a UNGA resolution, states that voted for the resolution may be ready to donate some voluntary contributions. The example of the UNHCR shows that “[a]s its work and size have grown, [its] expenditure has soared:”²¹⁵ voluntary donations by states, which represent almost the whole budget of this agency,²¹⁶ have followed the expansion of its scope of competencies. Yet, states likely would not fund

210. GA Res. 47/105, ¶ 14, U.N. Doc. A/RES/47/105 (Dec. 16, 1992), *available at* <http://www.un.org/documents/ga/res/47/a47r105.htm>.

211. UNHCR, *Internally Displaced People Figures*, <http://www.unhcr.org/pages/49c3646c23.html> (last visited June 22, 2011) [hereinafter *Displaced*].

212. U.N. Charter, *supra* note 99, art. 18, § 3.

213. Approximately 10.4 million refugees (excluding Palestinian refugees of the UNRWA’s competence) and 14.4 million IDP are cared for by the UNHCR. *See* UNHCR, *Refugee Figures*, <http://www.unhcr.org/pages/49c3646c1d.html> (last visited June 22, 2011); *see also*, *Displaced*, *supra* note 211.

214. *See, e.g.*, Biermann & Boas, *supra* note 157, at 79.

215. UNHCR, *Financial Figures*, <http://www.unhcr.org/pages/49c3646c1a.html> (last visited June 22, 2011).

216. *See id.* (93% of the UNHCR budget comes from voluntary donations by states and 3% from private donors).

a program that they did not support. The main issue concerning an international organization or an NGO's own initiative is that there would be no adequate limitation to states' sovereignty. As a consequence, such a program would be limited to adaptation and possibly assistance to intergovernmental negotiations on resettlement, whereas states would remain totally free as to whether to cooperate.

2. The Incapacity of Litigation to Establish a General Framework

Litigation provides a second possible medium for international law to deal with climate-induced migration. In 2002, Tuvalu considered filing a complaint before the International Court of Justice against Australia and the USA.²¹⁷ Again in 2007, the new Prime Minister Ielemia threatened the international community, "[i]f urgent action is not taken in addressing the adaptation needs of vulnerable countries, [Tuvalu] will be forced to go down the path of litigation" and "seek the necessary restitution for all damages created by climate change."²¹⁸ If no complaint has been lodged yet, litigation is surely not an option that should be excluded straightaway. It could be initiated either directly by a state that is the victim of climate change, or by a state that is the destination of climate change-induced migration; both claiming to be an indirect victim of climate change resulting from several states' high emissions of greenhouse gases.

State responsibility for air pollution was recognized as early as 1941, when the *Trail Smelter* arbitration panel ordered Canada to indemnify the USA for transboundary air pollution. The panel stated that:

[U]nder the principles of international law, . . . no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.²¹⁹

Similarly, the ICJ in *Corfu Channel* referred to "every State's obligation not to allow knowingly its territory to be used contrary to the

217. See, e.g., Kalinga Seneviratne, *Tiny Tuvalu Steps up Threat to Sue Australia*, U.S., COMMONDREAMS.ORG (Sept. 5, 2002), <http://www.commondreams.org/headlines/02/0905-02.htm>.

218. Ielemia, *supra* note 78, at 19.

219. *Trail Smelter (U.S. v. Can.)*, 3 R.I.A.A. 1911, 1965 (Perm. Ct. Arb. 1940), available at http://untreaty.un.org/cod/riaa/cases/vol_III/1905-1982.pdf.

rights of other States.”²²⁰ Later, the *Stockholm Declaration* provided that “States have, in accordance with the Charter of the United Nations and the principles of international law, . . . the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.”²²¹ According to Smith and Shaerman, the no-harm principle “is so widely accepted amongst members of the international community that it would be difficult to argue against the proposition that it forms part of customary international law.”²²²

Obviously, the main advantage of litigation is to “force” states to commit to international cooperation. However, litigation is in no case a perfect solution, in particular because some states, like the United States, have not accepted the compulsory jurisdiction of the ICJ.²²³ However, the main difficulty with litigation would be to establish causation. Sufficient scientific evidence of an anthropogenic climate change phenomenon probably exists for the no-harm principle to be applied rather than the precautionary principle. Yet, a plaintiff would have to prove the individual responsibility of states for global warming, the causal link between global warming and environmental effects, and the relation between this environmental effect and a given harm to the plaintiff.²²⁴ The last step may be particularly problematic, as community resilience to environmental phenomena widely depends on other conditions.²²⁵ Immigration in particular depends on many causes, and may be triggered by climate *in conjunction* with other drivers.²²⁶ Moreover, the most harmful consequence of climate change is not climate process, but climatic events. Plaintiffs will have difficulty demonstrating that a storm surge would not have occurred, or would not have been so devastating,

220. *Corfu Channel (U.K. v. Alb.)*, 1949 I.C.J. 4, 22 (Apr. 9).

221. United Nations Conference on the Human Environment, June 16, 1972, *Declaration of the United Nations Conference on the Human Environment*, art. 21, U.N. Doc. A/Conf.48/14/Rev.1 (1972), available at <http://www1.umn.edu/humanrts/instree/humanenvironment.html>; see also Rio Declaration on the Environment and Development, *supra* note 183, art. 2.

222. JOSEPH SMITH & DAVID SHEARMAN, CLIMATE CHANGE LITIGATION: ANALYZING THE LAW, SCIENTIFIC EVIDENCE & IMPACTS ON THE ENVIRONMENT, HEALTH & PROPERTY 49 (2006). Litigation could also be brought to the UNCLOS tribunal. William C.G. Burns, *Potential Causes of Action for Climate Change Damages in International Fora: The Law of the Sea Convention*, 2 MCGILL J. SUSTAINABLE DEV. L. & POL’Y 27 (2006).

223. See SMITH & SHEARMAN, *supra* note 222, at 53.

224. RODA VERHEYEN, CLIMATE CHANGE DAMAGE AND INTERNATIONAL LAW: PREVENTION, DUTIES AND STATE RESPONSIBILITY 238 (2005).

225. See IPCC WG II, *supra* note 22, at 357–90, available at <http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-chapter7.pdf>.

226. WARNER ET AL., *supra* note 27, at 2.

“but for” emissions of greenhouse gases by one particular state. Therefore, probability methods of assessment would be more adequate to establish a causal link than a classic binary “but for” test.²²⁷ Moreover, rather than scapegoating one or a few states for the wrongdoing of the whole developed world, the ICJ may be tempted to recognize a form of collective international responsibility, or even the responsibility of the international community of states. In recognizing either of these forms of liability, the ICJ would recognize that, as Delbruck argued, “[t]he traditional paradigm of repressive and early preventive environmental law, based on individual state obligations and liability,” could be “inadequate in view of the formidable global task of preserving the environment and thereby securing a livable planet for the future.”²²⁸

The consequence of state responsibility for wrongful acts should normally include restitution; if restitution is impossible, then compensation should be ordered.²²⁹ While restitution is impossible when a territory has been submerged or rendered uninhabitable, cession of territory may be fair compensation after a plaintiff's territory has become uninhabitable. Then successful litigation might force developed states to accept a certain number of climate migrants, thus dividing the affected population between numerous host countries. Though highly preferable, collective resettlement may be difficult to achieve through litigation. A court order for cession of territory would affect only one state—that which had jurisdiction over the ceded territory—and in all likelihood, the court would order that state to cede an amount of territory exceeding the share of responsibility owned by that state. One way to evade this issue would be to have affected countries file a collective complaint against all developed states, so that each state would be “responsible enough” to cede one piece of territory, which would then be allocated to one particular plaintiff. Another more realistic possibility would be if the ICJ asks the condemned states to negotiate and find one resettlement place in one of their territories, with a threat of more severe penalties if they cannot succeed in doing so. A higher condemnation may consist of additional compensation relating to the impossibility of a collective resettlement.

Even if it is unlikely to give a full response to the issue of climate-induced migration, litigation can bring some hope that international law will avoid the injustice in which states that are responsible for climate change are not very affected by its consequences. Eventually, litigation

227. SMITH & SHEARMAN, *supra* note 222, at 111.

228. See, e.g., Jost Delbruck, *A More Effective International Law or a New “World Law”?: Some Aspects of the Development of International Law in a Changing International System*, 68 IND. L.J. 705, 717 (1992).

229. International Law Commission, *supra* note 195, art. 44(1).

on climate change consequences may deeply transform the nature of international justice, which has never had to deal with cases of such proportion. Basing their survey on less severe climate change scenarios than are commonly accepted today, Told and Verheyen evaluated the damages at four percent of the OECD's Gross Domestic Product.²³⁰

However, it is quite unlikely that a 10,000-inhabitant state such as Tuvalu will dare to—and be able to—lodge a complaint against all developed states, given that a great amount of scientific and legal resources would be required for such a case. Litigation may nonetheless be a useful threat for “victim” states to push developed states into negotiations.

3. Necessity of Treaty Law and its Feasibility at the Regional Level

A third medium consists of the adoption of a new treaty. For instance, the UN Secretary-General's Report on climate change and its possible security implications highlighted that “[m]ultilateral comprehensive agreements would be the ideal preventive mechanism, providing where, and on what legal basis, affected populations would be permitted to move elsewhere, as well as their status.”²³¹ More scholars now reject a mere reform of the 1951 Refugee Convention, such as a second protocol extending the definition of refugees to include climate migrants.²³²

A practical reason for this belief is that political refugees may be the collateral victims of a very significant extension of the *Refugee Convention* scope by losing the specificity of their protection.²³³ Moreover, the *Refugee Convention* focuses on the protection of individual rights and would fail to take into account the climate migrants' collective rights. This document and its application by states and the UNHCR have prioritized return over assimilation, whereas climate migrants need to be considered permanent migrants and should not be destined to live in tents indefinitely. In addition, the extension of

230. Richard S.J. Tol & Roda Verheyen, *State Responsibility and Compensation for Climate Change Damages—A Legal and Economic Assessment*, 32 ENERGY POL'Y 1109, 1125 (2004).

231. U.N. Secretary-General, *supra* note 50, ¶ 72.

232. See, e.g., Biermann & Boas, *Protecting Climate Refugees*, *supra* note 158, at 11; Dana Zartner Falstrom, *Stemming the Flow of Environmental Displacement: Creating a Convention to Protect Persons and Preserve the Environment*, 13 COLO. J. INT'L ENVTL. L. & POL'Y 1 (2002); Hulme, *supra* note 43; *Contra* Jessica B. Cooper, *Environmental Refugees: Meeting the Requirements of the Refugee Definition*, 6 N.Y.U. ENVTL. L.J. 480 (1998).

233. See Moberg, *supra* note 116, at 22.

the refugee regime would disconnect the climate migrant issue from the climate adaptation issue, which could result in incoherent decision making. Furthermore, the *Refugee Convention* does not provide for burden-sharing because in principle the first host country must accept refugees,²³⁴ and because the UNHCR, which may provide some assistance, is funded by voluntary donations. This would make an extension of the *Refugee Convention* to climate migrants unfair and unacceptable for countries like India, which are likely to receive an amount of climate migrants disproportionate to their financial capacity or historical responsibility for climate change.

Finally, one of the strongest arguments against an extension of the *Refugee Convention* regime to climate migrants is that the *Refugee Convention* does not protect populations *before* they have moved. Therefore, the only way for climate migrants to fall within the protection of such a regime would be to illegally cross borders, often through dangerous means such as overcrowded boats. States would promptly assimilate asylum seekers with illegal migrants and reinforce their borders' protection so as to prevent asylum seekers from entering their territory. Therefore, an extension of the refugee protection to climate migrants would result in further increases in human trafficking and avoidable fatalities. Surely such a system would not meet the requirement that climate migrant protection be an early and sustainable response.

During the Sixteenth Conference of the Parties to the UNFCCC in Cancun, Equity BD, leading a group of NGOs, presented a petition for a "Protocol under the UNFCCC to ensure social, cultural and economic rights of the climate change induced forced migrants." Such a protocol would be based on UNFCCC Article 3, which provides that "developed country Parties should take the lead in combating climate change and the adverse effects thereof."²³⁵ Alternatively, Falstrom pleaded for a protocol to the Convention Against Torture.²³⁶ Westra recommended a "Framework Convention for Global Health," which would "go to the heart of the environmental justice issue—that is, to the blatant inequalities in life expectancy, the incidence of infectious diseases, and chronic diseases disproportionately present among the poor and developing countries, on the one hand, and rich nations on the other."²³⁷ Yet, these two approaches would fail to take collective rights fully into consideration.

234. See Convention Relating to the Status of Refugees, *supra* note 114, art. 31.

235. UNFCCC, *supra* note 86, art. 3, § 1.

236. Falstrom, *supra* note 232.

237. LAURA WESTRA, ENVIRONMENTAL JUSTICE AND THE RIGHTS OF ECOLOGICAL REFUGEES 188 (2009).

Climate-induced migration may be an issue “sufficiently new and substantial to justify its own legal regime instead of being forced within legal frameworks that were not designed to handle it.”²³⁸ Thus, other authors have suggested a “broad, interdisciplinary legal and policy framework.”²³⁹ Such a framework would contain guarantees of assistance, burden-sharing mechanisms, and institutional provisions. A definition of climate migrants should be adopted and the duty of any state to protect its rights should be provided for, particularly non-refoulement and non-discrimination. Unlike the *Refugee Convention*, a new treaty would encourage “long-term resettlement.”²⁴⁰ It should also contain provisions on humanitarian assistance for arriving climate migrants. A global fund with compulsory participation may organize financial contributions from developing states that are responsible for climate change.²⁴¹ In addition, a new treaty should create an expert body, which would be in charge of identifying affected areas from which migrants could claim protection and other affected areas that could claim international aid for adaptation. The international community would provide funding.²⁴² Though Biermann and Boas suggest that implementation would be organized by several existing international institutions working together, it seems more appropriate to establish a new agency, which would be wholly in charge of climate migrants’ welfare, even though the agency’s creation may be inspired by the UNHCR.²⁴³

Such a project is obviously very ambitious, and one may wonder whether an international convention would successfully be ratified. Falstrom recognizes that such an international convention “is not something that will happen overnight.”²⁴⁴ Similarly, Boncourt and Burson argue that “[h]ard-law’ policy instruments may be [sic] not be attractive to states, particularly when the potential scale of the obligations assumed is unknown.”²⁴⁵ Similarly, Docherty and Giannini

238. Docherty & Giannini, *supra* note 53, at 350.

239. *Id.* at 359, 373.

240. David Hodgkinson et al., *Towards a Convention for Persons Displaced by Climate Change: Key Issues and Preliminary Responses*, 8 THE NEW CRITIC 1, 2 (2008).

241. See Docherty & Giannini, *supra* note 53, at 378; Biermann & Boas, *supra* note 157, at 79.

242. See Biermann & Boas, *supra* note 157, at 79; Docherty & Giannini, *supra* note 53, at 389.

243. Biermann & Boas, *supra* note 157, at 79; Docherty & Giannini, *supra* note 53, at 388–89.

244. Falstrom, *supra* note 232, at 13.

245. Boncour & Burson, *supra* note 166, at 21; see also Angela Williams, *Turning the Tide: Recognizing Climate Change Refugees in International Law*, 30 L. & POL’Y 502, 517 (2008).

acknowledge that "there may be reluctance to develop a new treaty."²⁴⁶ However, they emphasize that affected states and their neighbors will push the international community toward a treaty, whereas other states may be sensitive to humanitarian or economic considerations, as well as to the management of international migration. As argued above, states may be less reluctant to negotiate and ratify conventions at the regional level, but an international framework should still monitor these efforts.²⁴⁷

In any case, conventions cannot be expected to solve every problem. A treaty is an instrument through which a state decides to commit itself to some obligations. Treaty obligations cannot extend beyond States' consent. The price to pay to obtain States' ratifications may be to remove ambitious norms from any potential Climate Migrant Convention. It is therefore significant that proposals for such conventions have taken little consideration of collective rights and the common but differentiated principle. Most of the burden could be supported by neighboring countries. This is deeply unfair and would create the risk of a "domino effect," as neighboring countries may themselves be affected by similar environmental degradation and unable to sustainably resettle climate migrants.²⁴⁸ Altogether, a treaty is likely to adopt a narrow humanitarian approach to climate migrant protection rather than a wide, rights-based approach focusing on sustainable resettlement. Climate migrants would be resettled on an individual basis in the suburbs of existing cities, thus losing any social, cultural, or national identity. Overall, the application of a convention should not be left to the goodwill of states without any independent control.

4. Soft Law as a Starting Point

A fourth mode of action consists of a resolution adopted either by the Security Council or the UNGA. The Security Council already addressed climate change in a debate on April 17, 2007.²⁴⁹ However, it did not adopt a resolution but instead concluded that the Security Council is not the correct institution to deal with climate change migration. In any case, the Security Council's responsibility for "maintenance of international peace and security"²⁵⁰ would exclude any general approach. This seems to undermine the triggering effect that a resolution by the

246. Docherty & Giannini, *supra* note 53, at 400.

247. See U.N. Secretary-General, *supra* note 50; see also Williams, *supra* note 245, at 518.

248. For example, Nigeria may receive many migrants from Niger, though Nigeria is itself concerned by land degradation (as well as by floods).

249. See UN S.C., *supra* note 100.

250. UN Charter, *supra* note 99, art. 24, § 1.

Security Council may have if the resolution decides that a well-known international issue calls for an immediate international answer. For this reason, a group of Pacific Small Island Developing States is currently pushing the Security Council to address this issue again and to adopt a resolution as the start to a lobbying effort.²⁵¹

The UNGA, which has already adopted Resolution 63/281 on climate migration,²⁵² may be a more appropriate forum for a decision because its procedures to adopt a resolution are less demanding and its general competence allows it to adopt a global approach to climate-induced migration. A resolution by the UNGA may press states to negotiate a global, concerted, early, and sustainable response to this phenomenon, which would implement the guiding principles of burden-sharing, subsidiarity, and respect for collective, as well as individual, rights. More concretely, a resolution may also recommend that existing fundamental rights of climate migrants be respected, including the right to life and the right not to be submitted to inhuman or degrading treatment. A right to resettlement may also be deduced from existing fundamental rights. Eventually, the UNGA may encourage states or international organizations to take some measures to protect climate migrants. Eventually, it may recommend that states ratify a convention.

Soft law would have a highly *symbolic* importance and may define universal norms that should be applied by states. Obviously, its main pitfall stems from the absence of an obligation of states to cooperate in a compulsory funding instrument, although a fund such as the UNHCR's can be opened to voluntary contributions. Furthermore, contrary to a treaty, *because* a resolution does not have to be ratified, it would not raise national debate and public awareness. Overall, one can hardly imagine that a UNGA resolution would be sufficient to push states to recognize the rights of climate migrants. Therefore, a resolution is probably a starting point, but it will in no case be sufficient to deal with climate-induced migration.

5. *A Combination of Different Modes of Action*

None of the above-mentioned modes of action alone would be able to deal with the issue of climate change-induced migration. This article agrees that an "alternative system for addressing the plight of those

251. Teall Crossen & Rona Meleisea, *Drowning Islands Demand Security Council Action on Climate Change*, ISLANDS FIRST (May 20, 2010), http://www.islandsfirst.org/updates/20100520_pressrelease.html; see also Francesco Sindico, *Climate Change: A Security (Council) Issue?*, 1 CARBON & CLIMATE L. REV. 26, 34 (2007) available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1013186.

252. See GA Res 63/281, *supra* note 101.

displaced by climate change may be better coordinated by way of regional agreement, operating under an international umbrella framework.”²⁵³ Such cooperation between the United Nations and regional organizations would not be a complete novelty. In 1974, the UNEP launched its Regional Seas Program, which supervises 140 countries in thirteen regional agreements. This program is not based on any international “hard-law” instrument, but on cooperation between the UNEP, states, and regional organizations through which binding standardized regional conventions are negotiated, adopted, and implemented.²⁵⁴

Similarly, a satisfying international legal framework on climate-induced migration should exist on three different levels. States should be individually concerned and cooperative so that they respect their obligations and collaborate to find collective resettlement solutions. At a universal level, common standards should be adopted as to which fundamental rights should be applied to climate migrants, and the burden should be shared between developed polluting states, and least-developed or developing affected states. However, only at an intermediary, regional level is it possible to imagine that ambitious conventions could be negotiated and widely ratified, and that collective resettlement solutions could eventually be negotiated.

IV. PROPOSAL FOR AN INTERNATIONAL LEGAL FRAMEWORK ON CLIMATE-INDUCED MIGRATION

Part II has shown that a new international legal framework on climate-induced migration should be created, and Part III has conceived this framework. Part IV now suggests an international legal framework to protect climate migrants. At the core of this proposal lies the principle of subsidiarity, which is not only justified by considerations of the efficiency of public policies, but also by the consideration that an international convention would not be able to be ratified and/or would not be able to produce any *collective* resettlement. The First Act consists of the adoption of a UNGA resolution on the international responsibility

253. Williams, *supra* note 245, at 518; *see also* Boncour & Burson, *supra* note 166, at 23 (suggesting “an interconnected and mutually-reinforcing series of global, regional, and bilateral responses under the umbrella of the UNFCCC”).

254. *See generally* UNEP, REGIONAL SEAS, PARTNERSHIPS FOR SUSTAINABLE DEVELOPMENT (2005), available at http://www.unep.org/regionalseas/publications/brochures/pdfs/regionalseas_brochure.pdf; Akiwumi & T. Melvasalo, *UNEP's Regional Seas Programme: Approach, Experience and Future Plans*, 22 MARINE POL'Y 229 (1998).

for the protection of climate migrants. This resolution refers to, encourages, and supervises negotiations at the regional level of international governance, which constitute the Second Act of the proposal.

*A. First Act: a UNGA Resolution on the International
Community's Responsibility to Protect Climate
Migrants*

No international legal framework on climate-induced migration can be adopted without a preliminary campaign to raise public awareness and press states to become concerned. This should be achieved through a Security Council resolution recognizing the security challenge posed by climate-induced migration and the necessity for international action.²⁵⁵ Only afterwards may the UNGA take on a substantive resolution project. This resolution, conceived as the start of a longer process consisting of substantial regional negotiations, should set the tone for an international legal framework on climate-induced migration. This "Resolution on the International Community's Responsibility to Protect Climate Migrants" ("the Resolution") should contain guidelines as well as institutional provisions.

*1. Guidelines on Climate Migrants and Climate-
Induced Migration*

The first part of the Resolution should recognize guidelines for the treatment of climate migrants and for the monitoring of climate change-induced migration. Rather than directly establishing protection for climate migrants, these guidelines should constitute general considerations that may later be implemented through regional negotiations or referred to by national institutions. These guidelines would play an important role in framing the debate and adopting a common approach with key priorities. A climate migrant should be defined as "a person who, for a reason linked to anthropogenic climate change, is unable to live in dignity in the territory of his or her country of nationality." Climate change IDPs would therefore be excluded from this regime, but they are already formally protected as IDPs. Climate change IDPs' vulnerability should, however, be recalled in the Resolution, and some of the principles applied to climate migrants may be extended to them.

The Resolution should recall the obligation of states to protect

255. See Akiwumi & Melvasalo, *supra* note 254, at 153.

individual and collective human rights at any stage. It should clearly state that migrants are, and remain, human beings, and that as a principle their status as migrants should not lead to any differential legal treatment. It should confirm that states have a primary obligation to protect their own population's human rights. However, it should also assert that the international community as a whole, and each state individually, with regard to national circumstances (e.g. financial capacities), has a secondary obligation to protect the human rights of any person whose own state is unable or unwilling to protect those rights. Some individual and collective human rights should be explicitly underscored, such as the right to life, the right to freedom from inhuman and degrading treatment, the right to health, and the right to a family life, but also cultural rights—the right to a collective identity, the right to self-determination, and minority rights. Particular applications of universal human rights should be identified, such as a right to non-refoulement and the right to a place to live in safety and dignity.

Overall, the right of climate migrants to a safe and sustainable relocation should be affirmed. Certain applications of this right should be explicitly underscored: the right to assistance during one's insertion in the host country, the right to freedom from discrimination, and the right to conserve one's cultural identity when settling into the host country's society. The notion of a right to a nationality may be put forward to suggest that the host state should establish specific naturalization procedures for climate migrants.²⁵⁶

As for the responsibility of states, the Resolution should assert the relevance of the PCDR with respect to protection of climate migrants. It should confirm that each state shall contribute to solving the problems relating to climate-induced migration in proportion to its historical responsibility for climate change as well as its economic capacity. The Resolution should recall the duty of developed states to take the lead on the policies necessary for the protection of climate migrants.

The Resolution should establish the principle of an early and sustainable response as a way to minimize human suffering, costs, and security threats; as well as the principle of a global approach to all the consequences of climate change on vulnerable populations and the necessity to coordinate local adaptation and population displacement strategies. The Resolution should also apply the principle of subsidiarity of action and emphasize that the regional level of governance is the best

256. This provision may be inspired by article 34 of the Convention Relating to the Status of Refugees, *supra* note 114 (“The Contracting States shall as far as possible facilitate the assimilation and naturalization of refugees. They shall in particular make every effort to expedite naturalization proceedings and to reduce as far as possible the charges and costs of such proceedings.”).

forum for resettlement negotiations. Accordingly, it should press states to engage in bilateral and regional negotiations in order to identify future needs of climate migration and in order to reach a negotiated solution in the light of these guiding principles. Regional negotiations should produce both a general legal framework and concrete ad hoc solutions to actual needs of climate migration.

2. Institutional Provisions

To complement the Guiding Principles, the Resolution should establish a UN Program on Climate Change Migration to promote negotiations at the bilateral and regional level, and to supervise the implementation of the international framework (i). Moreover, an international, independent expert panel should be in charge of scientific assessments used as the basis of regional negotiations (ii). Eventually, a Global Fund on Climate-Induced Migration should be monitored by the Program on Climate Change Migration (iii).

a. Global Fund on Climate-Induced Migration

A fund should be created, entitled the “Global Fund on Climate-Induced Migration” (“Fund”). Its income should come from voluntary contributions by states and private actors. The Fund should be used to help find regional- or bilateral-negotiated solutions to actual or future needs of migration induced by climate change. It should not cover costs of in situ adaptation, as in situ adaptation is already funded by UNFCCC tools.²⁵⁷ However, the requirement of a global approach would demand that the Fund be closely coordinated with financial tools within the UNFCCC system. The main purpose of the Fund should be to convince third-party states to actively collaborate in resettlement solutions, in particular through compensation to states that agree to welcome climate migrants. Specific funding mechanisms may be created in order to ensure the successful integration of climate migrants. For instance, part of the compensation may be correlated to an evaluation of political outcomes with regard to social insertion, based on indicators such as climate migrants’ differential rate of unemployment two years after their arrival.

257. In order to complete the Kyoto Adaptation Fund, the 16th Conference of the Parties to the UNFCCC decided to set up a “Green Climate Fund” in charge of ensuring a balanced funding of adaptation and mitigation activities. See UNFCCC COP 16, *supra* note 102, ¶ 102.

b. United Nations Agency on Climate
Change Migration

Because the issue of climate-induced migration is too widespread and too instance-specific to be addressed by an existing institution, the United Nations should create an ad hoc monitoring institution. This institution should report to the UNGA and it may be entitled the "United Nations Agency on Climate Change Migration" ("Agency"). In the absence of field operations, the functioning budget of the Agency should be relatively limited, and it might be funded by the general budget of the United Nations.

The Agency should have three main missions. Firstly, it should encourage and supervise regional negotiations. This may include suggesting terms of negotiations and offering good offices, mediation, or conciliation. For this purpose, it should be authorized to adopt soft-law instruments, such as a manual on the implementation of the guiding principles, standard or specific terms of negotiations, and reports of good practices and recommendations. Secondly, the Agency should administer the Fund, particularly through encouraging voluntary donations by states, and the Agency should spend this fund so as to help successful regional negotiations. Thirdly, the Agency should raise global public awareness on climate-induced migration by funding scientific activities and reporting regularly on ongoing climate-induced migration.

Throughout these missions, the Agency should act to facilitate effective and successful implementation of the framework. As a forum for coordination of all actors concerned with climate migrants, it should work together with other international institutions such as the UNHCR, the UNFCCC, the UNEP, the UNDP, and the GEF. The Agency, in turn, will benefit from the specific expertise of each of these institutions. The Agency should also cooperate closely with regional institutions, states, and NGOs.

c. Expert Panel

The Resolution may either create an ad hoc expert body or call for an extension of the mandate of the IPCC ("Panel"). Functioning essentially as a referee between diverging interests, this expert panel should foster regional negotiations and the functioning of the Resolution's framework by providing scientific assessments. Because of the importance of these assessments, the experts should be completely independent.

The first task of the Panel would be to encourage states to contribute to the Fund, for instance through the regular assessment of each state's expected contributions to the fund. Such an assessment may be based on states' respective historical responsibility for climate change and on the

efforts states are making to reduce their greenhouse gas emissions, as well as on their financial capacity. This assessment may also take into consideration the costs of adaptation supported by each state and its past participation in the research and implementation of collective resettlement solutions.

Either the Agency or any interested state could initiate other assessments by the Panel. First, the Panel could be asked to assess whether there is ongoing migration and whether there is a need for international migration. This assessment could prevent states from claiming that would-be climate migrants are not “forced” to move and could further prevent states from rejecting support for any migration program under the pretext that the program funds *in situ* adaptation projects.²⁵⁸ Secondly, concerned states could not only ask the Panel to assess the capacity of one or several states to welcome climate migrants using objective criteria, such as their domestic population and demographic growth, natural resources, socio-economic, and political capacity to integrate climate migrants, but also to assess new economic opportunities allowed by climate change. Thus, it would review the “we don’t have a place for them” argument with an independent perspective and determine objectively which state is most able to welcome climate migrants, in order to push states towards an agreement on an international resettlement program.

B. Second Act: Regional Negotiations under the Resolution’s Umbrella

The Resolution would only be a large umbrella under which regional negotiations should be organized. These regional negotiations should take two different forms. First, negotiations should be organized as general regional agreements, establishing more detailed, ambitious, and concrete legal frameworks on climate-induced migration. The Agency should participate in such negotiations and ensure that these agreements are compatible with the Resolution’s guidelines. Negotiations at the regional level should also deal with concrete climate-induced migratory needs on a case-by-case basis, within the international legal framework of the Resolution and with help of the Agency, the Fund, and the Panel. Such negotiations would benefit from a framework

258. For such an argument, see Public communiqué, New Zealand Ministry of Foreign Affairs and Trade, *New Zealand’s Immigration Relationship with Tuvalu* (Aug. 4, 2009), available at <http://www.mfat.govt.nz/Foreign-Relations/Pacific/NZ-Tuvalu-immigration.php> (in which New Zealand rejects any resettlement program from Tuvalu through underlining its commitment for “climate change projects in developing countries”).

that establishes key priorities, assesses each state's duties, introduces an institution that supervises and fosters cooperation, and compensates states that cooperate actively. States themselves would surely prefer a low-cost negotiated solution to the higher price of building fences, enduring higher regional insecurity, severing their diplomatic relations with their neighbors and the international community, and facing growing discontent in civil society against their policy.

At the end of the day, all would depend on states' involvement in these ad hoc negotiations; it is the fate of any international legal project that the beginning and the end of the story lie in the hands of states. If international institutions cannot do anything without the consent of states, they should do everything possible to encourage states to cooperate and lessen the human suffering arising from climate change. This proposal aims at establishing a legal background that will help international cooperation to succeed in protecting climate migrants.

Notes & Comments

Overcoming Barriers to Indigenous Peoples' Participation in Forest Carbon Markets

Katie Patterson*

ABSTRACT

This note seeks to identify principles and methods for encouraging the participation of indigenous peoples in emerging forest carbon markets. To date, the programs under the United Nations Framework Convention on Climate Change (“UNFCCC”) have failed to adequately account for emissions from tropical deforestation. Reduced Emissions from Deforestation and Forest Degradation (“REDD”) proposals aim to close the gaps currently in existence in the UNFCCC programs by accounting for emissions from tropical deforestation and incentivizing reductions in those emissions. Inevitably, REDD programs and other forest carbon markets will affect any indigenous populations living in and around tropical forests. If not carefully crafted, these programs can have significant negative effects on forest-dependent indigenous peoples. However, a well-designed REDD program or forest carbon market could actually benefit these peoples by giving them access to an additional source of income. This note examines how indigenous peoples in the United States and New Zealand have been able to participate in forest carbon markets and how their strategies interact with the property regime in each country. From these case studies, some lessons learned for the future development of REDD programs and forest carbon markets are:

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(1) carefully define land tenure—if it is not already defined—in a way that respects indigenous occupation and ownership; (2) involve indigenous peoples throughout the design process to more efficiently address problems that may arise; (3) design creative solutions to permanence issues by taking into account indigenous traditions and beliefs and national property laws; and (4) encourage aggregation of forest carbon projects to lower transaction costs.

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I. INTRODUCTION

International negotiations to address climate change have been proceeding at a snail's pace, but efforts to reduce emissions from deforestation and forest degradation ("REDD") are progressing relatively rapidly. Tropical deforestation is a major contributor to climate change, yet it is entirely left out of the Kyoto Protocol and its implementing programs. REDD would fill the gap in the current regime by accounting for and crediting avoided deforestation in tropical forest countries. Many of the developing countries with the most to gain from REDD programs have indigenous populations living in and around the forests to be

protected. The REDD programs in these countries will inevitably have a significant effect on the forest-dwelling indigenous populations. If indigenous rights to forests and their environmental services are trampled, indigenous people may be subject to land-grabbing, restriction of their traditional uses of the forests, increased conflict around their forests, and human rights violations. However, if REDD programs recognize indigenous rights to forests, indigenous people may be able to secure their land ownership and draw revenues from REDD and other programs that compensate for the maintenance and restoration of forest ecosystem services. Indigenous populations face unique barriers to participation in REDD programs, but they also have distinct advantages for overcoming some of the general concerns with crediting forestry activities.

This Note seeks to identify ways to facilitate indigenous peoples' participation in REDD programs. It will do so through broad case studies that analyze indigenous forestry projects in the United States and New Zealand and the mechanisms indigenous peoples have used to overcome the barriers to market access they face. Section II will introduce REDD and describe the major issues facing it and other forestry schemes, including: permanence; leakage; additionality; and measuring, monitoring, and verification ("MMV"). Section III will discuss indigenous concerns about REDD and describe the ways in which three of the main issues with forestry schemes—permanence, additionality, and leakage—manifest themselves for indigenous peoples. Sections IV and V will explore how these issues have emerged and have been addressed with the Nez Perce tribe in the United States and the Maori people in New Zealand. Section VI will then draw lessons from these case studies and show how they can be used to facilitate indigenous participation in REDD programs in tropical forest developing countries.

II. INTRODUCTION TO REDD

Land use and deforestation are estimated to make up over thirty percent of global annual greenhouse gas emissions—more than the entire global electric generation sector and more than double the global transportation sector.¹ Tropical deforestation alone accounts for approximately seventeen percent of global annual greenhouse gas

1. INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE [IPCC], CLIMATE CHANGE 2007: MITIGATION OF CLIMATE CHANGE: WORKING GROUP III CONTRIBUTION TO THE FOURTH ASSESSMENT REPORT 105 (2007) (estimating agriculture as contributing 13.5% of global CO₂ emissions, forestry as 17.4%, energy supply as 25.9%, and transport as 13.1%).

emissions; more than the global transportation sector.² As a result of these startling figures, policymakers in both the United States and the international arena have begun paying increasing attention to the need to include a scheme for reducing emissions from deforestation and forest degradation—specifically in tropical forest countries—in global climate change agreements. The Kyoto Protocol severely limited accounting for forestry activities for the first commitment period.³ The Marrakesh Accords required Annex I parties to the Kyoto Protocol to account for their emissions and sequestrations from afforestation, reforestation, and deforestation.⁴ However, the Clean Development Mechanism allows projects in developing countries to earn credits only for afforestation and reforestation projects—not avoided deforestation projects.⁵

Proposals for a post-2012 climate instrument have included more robust forestry provisions that would include tropical forests.⁶ The Copenhagen Accord specifically addressed the importance of reducing emissions from deforestation and forest degradation and called for the “immediate establishment of a mechanism including REDD-plus.”⁷ The Cancun Agreements made further progress by including a section on REDD-plus in the Outcome of the Ad Hoc Working Group on long-term Cooperative Action under the Convention (“AWG-LCA”).⁸ This section

2. Nigel Purvis, Global Climate Negotiations and Tropical Deforestation, 5, Nov. 17, 2009 (written testimony prepared for the Senate Committee on Energy and Natural Resources), *available at* <http://www.rff.org/RFF/Documents/RFF-CTst-Purvis-Nov09.pdf>.

3. *See* UNFCCC, *Decision 11/CP.7: Land Use, Land-Use Change, and Forestry*, U.N. Doc. FCCC/CP/2001/13/Add.1 (Jan. 21, 2002).

4. UNFCCC, *Decision 16/CMP.1: Land Use, Land-Use Change, and Forestry*, Annex (B), U.N. Doc. FCCC/KP/CMP/2005/8/Add.3 (Mar. 30, 2006).

5. UNFCCC, *Decision 17/CP.7: Modalities and Procedures for a Clean Development Mechanism, as Defined in Article 12 of the Kyoto Protocol*, para. 7(a), U.N. Doc. FCCC/CP/2001/13/Add.2 (Jan. 21, 2002).

6. *See* UNFCCC, *Decision 1/CP.13: Bali Action Plan*, U.N. Doc. FCCC/CP/2007/6/Add.1* (Mar. 14, 2008); UNFCCC, Ad Hoc Working Group on Long-Term Cooperative Action under the Convention [AWG-LCA], *Negotiating Text*, ¶¶ 106–28, U.N. Doc. FCCC/AWGLCA/2009/8 (May 19, 2009); U.K. DEP'T OF ENERGY & CLIMATE CHANGE, *THE ROAD TO COPENHAGEN: THE UK GOVERNMENT'S CASE FOR AN AMBITIOUS INTERNATIONAL AGREEMENT ON CLIMATE CHANGE* 53–55 (2009).

7. UNFCCC, *Draft Decision -/CP.15: Proposal by the President: Copenhagen Accord*, U.N. Doc. FCCC/CP/2009/L.7 (Dec. 18, 2009), *available at* <http://unfccc.int/resource/docs/2009/cop15/eng/107.pdf>; UNFCCC, *Decision -/CP.15* (Dec. 18, 2009) (taking note of the Copenhagen Accord), *available at* http://unfccc.int/files/meetings/cop_15/application/pdf/cop15_cph_auv.pdf. “REDD-plus” means reduced emissions from deforestation and degradation in addition to other forestry and land-use activities. *About REDD+*, UN-REDD PROGRAMME, <http://www.un-redd.org/AboutREDD/tabid/582/Default.aspx> (last visited Feb. 8, 2011).

8. UNFCCC, *Draft Decision -/CP.16: Outcome of the Work of the Ad Hoc Working*

encourages developing countries to take actions to reduce emissions from deforestation and forest degradation, sustainably manage forests, and conserve and enhance forest carbon stocks.⁹ The section also specifically requests countries undertaking such actions to ensure “the full and effective participation of relevant stakeholders, inter alia, indigenous peoples and local communities.”¹⁰

Emerging national carbon crediting schemes in the United States and New Zealand are also incorporating forestry and land use, most commonly as offsets, credits that may be bought by entities with compliance obligations. Proposed U.S. legislation allowed the use of offset credits from reduced deforestation.¹¹ In 2008, New Zealand passed legislation creating an Emissions Trading Scheme that not only allows the use of Kyoto Protocol forestry offset credits such as Certified Emissions Reductions (“CERs”) and Removal Units (“RMUs”), but also includes the New Zealand forestry sector as a covered sector with its own compliance obligations.¹²

Sub-national entities within the United States are working toward the creation of both binding and voluntary schemes that will accept forestry offset credits. The Regional Greenhouse Gas Initiative (“RGGI”), the only currently operating greenhouse gas compliance scheme in the United States, accepts offset credits for afforestation only.¹³ The Chicago Climate Exchange (“CCX”) is a voluntary U.S. carbon market that issues offset credits to domestic afforestation,

Group on long-term Cooperative Action under the Convention, available at http://unfccc.int/files/meetings/cop_16/application/pdf/cop16_lca.pdf.

9. *Id.* para. 70.

10. *Id.* para. 72.

11. Boxer-Lieberman-Warner Climate Security Act, S. 3036, 110th Cong. § 2403 (2008); Discussion Draft, H.R. ____, 110th Cong. § 764 (2008) (“The Dingell-Boucher Discussion Draft”); American Clean Energy and Security Act of 2009 [ACES], H.R. 2454, 111th Cong. § 503 (2009) (the “Waxman-Markey Bill”).

12. Climate Change Response (Emissions Trading) Amendment Act 2008, (N.Z.).

13. REGIONAL GREENHOUSE GAS INITIATIVE [RGGI], MODEL RULE 91 (2008), available at <http://www.rggi.org/docs/Model%20Rule%20Revised%2012.31.08.pdf>. Afforestation is the process of establishing a forest on land not previously forested. *Afforestation*, MERRIAM-WEBSTER DICTIONARY, <http://www.merriam-webster.com/dictionary/afforestation> (last visited Feb. 5, 2011). In the forest carbon crediting context, an afforestation project established forest on an area that has not been forested for a specified period of time before the project. *See, e.g.*, UNFCCC, *Decision 16/CMP.1: Land Use, Land-Use Change, and Forestry*, Annex, para. 1(b), U.N. Doc. FCCC/KP/CMP/2005/8/Add.3 (Mar. 30, 2006) (afforestation is establishing forest on land that has not been forested for a period of at least fifty years leading up to the start of the project); RGGI, MODEL RULE 106 (2008) (land must have been in a non-forested state for at least ten years leading up to the start of the project).

reforestation, and sustainable forest management projects.¹⁴ CCX also accepts Clean Development Mechanism ("CDM") forestry CERs that meet its standards for domestic forestry projects.¹⁵ Several states and provinces in the United States, Brazil, Indonesia, Nigeria, and Mexico are part of the Governors' Climate and Forests Task Force ("GCF"), which is developing rules and capabilities for including forestry sector emissions reductions in sub-national and national compliance regimes.¹⁶ The GCF is currently developing frameworks to generate the first compliance-grade REDD credits in some of its member states and provinces.¹⁷

REDD differs from typical forestry crediting programs primarily in that it is jurisdiction-based instead of project-based. In a REDD program, a baseline is set for an entire province, state, or country based on past, current, or projected deforestation rates.¹⁸ The jurisdiction then creates targets for the reduction of deforestation rates below the baseline.¹⁹ If deforestation rates in the jurisdiction fall to meet those targets, the jurisdiction gets carbon credits to sell to international buyers. If rates do not fall, the jurisdiction gets no credits.

Although forest carbon credits and REDD continue to gain acceptance, fundamental issues remain in ensuring the creation of a reliable crediting system. The main issues related to forestry emissions accounting are permanence, leakage, additionality, and MMV. Permanence concerns stem from the risk that trees planted or preserved may be cut down or otherwise destroyed in the future, thus releasing their credited carbon stocks into the atmosphere. Carbon trading schemes use various approaches to ensure permanence, or alternatively to ensure that credits are not retained by owners who no longer maintain their forest projects. For example, some schemes require permanent transfer of property rights, such as the creation of a conservation easement, to ensure that the land use will not change in the future.²⁰ Other more flexible schemes issue credits for a limited time period.²¹ Crediting schemes can also account for future land use changes by requiring

14. CHICAGO CLIMATE EXCHANGE, GENERAL OFFSET PROGRAM PROVISIONS 7–8 (2009).

15. *Id.* at 16.

16. *About GCF*, GOVERNORS' CLIMATE & FORESTS TASK FORCE, <http://www.gcftaskforce.org/about.html> (last visited Feb. 5, 2011).

17. *Id.*

18. GLOBAL CANOPY PROGRAMME, THE LITTLE REDD BOOK 19 (2008).

19. *See id.*

20. *See, e.g.*, CLIMATE ACTION RESERVE, FOREST PROJECT PROTOCOL VERSION 3.1, at 10 (2009).

21. *See discussion infra* Part IV.A.

landowners who back out of their commitments to repay the value of carbon credits they received.²² In some cases, landowners are required to deposit a portion of the credits they receive into a buffer pool.²³ Credits from this buffer pool may be surrendered to make up for unavoidable reversal in land cover, such as that caused by forest fires or other natural disasters.²⁴

Leakage, as it relates to land use, refers to the risk that emissions reductions due to land-use change in one area will simply cause the previous use to move to another area, resulting in no net change in emissions. A REDD scheme could potentially ease the leakage problem in tropical forest countries. Unlike the project-based system of the CDM, REDD allows whole countries or other sub-national jurisdictions to engage in jurisdiction-wide accounting to determine net rates of deforestation or sequestration. Under this form of accounting, the jurisdiction can account for a land use that was displaced from one area of the jurisdiction to another. Individual forestry projects could still occur within these jurisdictions, but to a certain extent their crediting would be tied to the performance of the entire jurisdiction in relation to the jurisdiction-wide baseline.

Additionality is the requirement that emissions reductions be above and beyond the "business as usual scenario," including compliance with existing laws and regulations.²⁵ In other words, additional emissions reductions are those that would not have occurred absent the existence of the forest carbon credit market. Additionality can be hard to establish, given the uncertain nature of predicting what would have happened absent a carbon trading scheme. However, jurisdiction-wide accounting in a REDD system would help solve the additionality problem because the emissions from land use could be compared with a national baseline instead of at the project level. A national deforestation baseline can be determined by looking at historical national deforestation rates and trends, whereas a project-level baseline involves more guesswork about what would happen to a specific forest area.

Finally, establishing an accurate system of MMV for carbon stored in forests is still a challenge that can entail significant expense for landowners. Numerous forest carbon models now exist to estimate carbon storage, but the complexity of forest ecosystems can make actual carbon quantification extremely difficult.

22. See, e.g., CLIMATE ACTION RESERVE, *supra* note 20, at 9.

23. *Id.* at 56.

24. *Id.*

25. See GLOBAL CANOPY PROGRAMME, *supra* note 18, at 19.

III. INDIGENOUS CONCERNS AND CHALLENGES ASSOCIATED WITH REDD

There has been a great deal of indigenous opposition to REDD in its current form. Indigenous peoples (and developing countries) believe that they should not have to "clean up" after developed countries' historical emissions,²⁶ and some even allege that the CDM has caused the death of indigenous peoples who refused to relinquish their territories.²⁷ Indigenous dissatisfaction with the way REDD projects are currently carried out jeopardizes any chance of success the program might have in tropical forest countries. Indigenous peoples argue that because they know how to live in "harmony with Mother Earth," REDD projects should take more notice of indigenous land tenure and management practices.²⁸ The United Nations Declaration on the Rights of Indigenous Peoples reinforces this notion and emphasizes the right of indigenous peoples to live on and control their traditional lands.²⁹

A successful REDD program must facilitate the participation of indigenous peoples. Without indigenous participation, REDD projects will face numerous challenges on human rights grounds and will risk further disadvantaging indigenous peoples and property rights.³⁰ Not only will REDD projects benefit from indigenous support and participation; indigenous peoples can benefit in multiple ways from participating in REDD projects. New streams of income, improved public goods such as health and education, new skills in forest monitoring and business administration, enhanced preservation of indigenous culture, and increased security of property rights are just a few of the benefits of a well-planned REDD program.³¹ Because of the

26. See *Indigenous Peoples Must be Included in Global Negotiations Aimed at Combating Climate Change, Say Speakers in Permanent Forum*, U.S. FED. NEWS, April 22, 2008 [hereinafter *Indigenous Peoples Must be Included*].

27. *Id.* (statement by Fiu Elisara).

28. *Id.* (statement by Adan Alarcon).

29. See U.N. Declaration on the Rights of Indigenous Peoples, G.A. Res. 61/295, pmbl. arts. 10, 25–26, U.N. Doc. A/RES/61/295 (Sept. 13, 2007).

30. Estebancio Castro Diaz, *Climate Change, Forest Conservation and Indigenous Peoples Rights*, 4, International Expert Group Meeting on Indigenous Peoples and Climate Change, Darwin, Austl., Apr. 2–4, 2008

("Current proposals for REDD as a solution to climate change, especially where they are based on the inclusion of REDD initiatives in the global carbon market, will devastate Indigenous Peoples' lands and territories and will cause more human rights violations. Market-based mechanisms like carbon trading, agrofuels and especially voluntary carbon offset projects designed to avoid deforestation often violate the fundamental human rights of Indigenous Peoples.").

31. Nicholas Anderson, *REDDy or Not? The Effects on Indigenous Peoples in*

importance of forestry use for both indigenous peoples and the climate change policy community, REDD policymakers should make special efforts to help indigenous peoples participate in these programs and should take the views of indigenous peoples into account in designing the programs. This means devising ways for indigenous peoples to work within their unique circumstances to overcome the challenges of earning emissions credits for forestry projects. Permanence, additionality, and MMV each present special issues for indigenous people.

A. Permanence

The property systems created on indigenous lands have a significant effect on the strategies available to indigenous people for addressing permanence concerns. Uncertain land tenure and complex, restricted property rights can make it difficult for indigenous landowners to provide long-term guarantees of land use. However, the unique relationship between indigenous peoples and their land, as well as the continuity of land ownership and management under indigenous governing entities may actually lower the permanence risks of indigenous forestry projects compared to other forestry projects.

Uncertain land tenure is possibly the largest barrier to indigenous participation in REDD programs. Not only does uncertain land tenure pose a risk to the continued indigenous ownership or occupation of land; it also makes a REDD program more challenging logistically. Under such circumstances, it is difficult to determine who is entitled to receive credits, and investors face more risk in their projects.³² During the era of European colonialism, Europeans often disregarded indigenous land rights in order to acquire land in newly colonized areas.³³ The legal justification for such disregard was often based upon the Rule of Discovery, which treated indigenous lands as unclaimed because of the frequent failure of indigenous people to make improvements upon or cultivate the land.³⁴ Indigenous people were not using all of their land in the European sense, therefore the Europeans felt entitled to settle and make use of the indigenous land.³⁵ Where improvements had been made or Europeans otherwise recognized land title, settlers acquired land

Brazil of a Global Mechanism for Reducing Emissions from Deforestation and Degradation, 2 J. SUSTAINABLE DEV. 18, 23 (2009).

32. INT'L UNION FOR CONSERVATION OF NATURE [IUCN], LEGAL FRAMEWORKS FOR REDD: DESIGN AND IMPLEMENTATION AT THE NATIONAL LEVEL 15 (2009).

33. Eric Dannenmaier, *Beyond Indigenous Property Rights: Exploring the Emergence of a Distinctive Connection Doctrine*, 86 WASH. U. L.R. 53, 65 (2008).

34. *Id.*

35. *Id.* at 65–66.

through purchase.³⁶ Often, these purchases were on terms that were not advantageous to indigenous sellers.³⁷

Many governments have since sought to restore indigenous property rights to some extent, but the attempt to achieve this while maintaining state sovereignty and protecting other existing property rights often leads to multiple layers of property schemes and convoluted, unclear indigenous ownership systems that bear no resemblance to traditional indigenous property systems.³⁸ In rural areas of developing countries, where land tenure may be insecure in general, indigenous ownership claims are even more precarious. The resulting uncertainty in land ownership creates barriers to indigenous peoples benefiting from forestry projects because Indigenous peoples cannot possibly guarantee permanence of a forestry project on land for which their ownership is not recognized. Without ownership over the land, they cannot prevent it from being deforested or otherwise control its use. This situation also creates an incentive for deforestation because, under European property theories, clearing land and farming are ways to assert ownership over that land.³⁹ In addition, people with precarious ownership have an incentive to sell timber and other land resources rapidly to avoid a missed income opportunity wherein someone else sells those resources first.

For REDD to succeed, participating countries must carefully clarify land tenure for indigenous people so as to avoid serious unintended negative consequences. If property ownership is surveyed haphazardly in a rush to establish a carbon market, indigenous people with few documented claims to ownership may find themselves with their property rights once again disregarded.⁴⁰ In addition, a REDD scheme could increase land grabbing and loss of indigenous lands as previously marginal lands gain value as potential carbon project sites.⁴¹

The two case studies discussed in this paper are located in the United States and New Zealand, which have generally well-defined land tenure, although there are still a number of Maori holdings in New

36. *Id.* at 66.

37. *See infra* Part V.

38. *See* Dannenmaier, *supra* note 33, at 71 (stating that the conflict between title and sovereignty makes it difficult for a state to retroactively give title to indigenous lands while upholding State sovereignty).

39. Elisabeth Rosenthal, *In Brazil, Paying Farmers to Let the Trees Stand*, N.Y. TIMES, Aug. 22, 2009, at A1. Brazilian programs and law allow land users to gain title to land they have developed and used for five uninterrupted years. IUCN, *supra* note 32, at 8.

40. *Indigenous Peoples Must be Included*, *supra* note 26 (statement by Jinine Laisharam).

41. Anderson, *supra* note 31, at 22.

Zealand that do not have well-defined property rights.⁴² Because of the complex systems in which property rights have been established in these countries, a separate set of issues related to title emerges. In both nations, indigenous property carries restrictions on alienability or encumbrance (generally designed to protect indigenous property interests). This can prevent owners from transferring property rights in an arrangement such as a conservation easement, which would help ensure permanence of carbon emissions reductions.⁴³ However, indigenous governing entities that own their land in common for the benefit of their members—which often more closely reflects traditional indigenous property systems—may actually be able to provide increased assurance of permanence. Because of the restrictions on alienability, indigenous land will remain in indigenous ownership. In addition, a governing entity can incorporate a particular land use into its laws and regulations, which further increases stability and permanence.

B. Additionality

Many indigenous lands in tropical forest countries lie deep within forests in areas that have not yet been reached by logging activity or other pressures to clear the land.⁴⁴ Therefore, the business-as-usual scenario for these lands may not predict much imminent deforestation. However, if tropical deforestation continues at its current rate, it will reach even the most remote indigenous lands before long. One study predicts that existing Amazon forest will be reduced forty percent by 2050 if current deforestation trends in the area continue.⁴⁵

The current climate change regime may incentivize increased tropical deforestation because forestry accounting in developed countries with emissions reductions commitments may lead those countries to “export” deforestation to countries without reduction commitments. This scenario, combined with a lack of crediting for reduced deforestation in developing countries is likely to increase rates of tropical deforestation

42. Bill Robertson, *Maori Land Tenure: Issues and Opportunities*, 6, 8, N.Z. Inst. of Surveyors Annual Conference, Auckland, N.Z., Oct. 2004 (on file with author).

43. See *Tribal and Indian Land*, TRIBAL ENERGY & ENVTL. INFO. CLEARINGHOUSE, <http://teeic.anl.gov/triballand/index.cfm> [hereinafter *Tribal and Indian Land*] (last visited Feb. 5, 2011); FIONA CARSWELL ET AL., A FRAMEWORK FOR ENGAGEMENT OF MAORI LANDOWNERS IN “CARBON FARMING” USING INDIGENOUS FOREST REGENERATION 8, 20 (2002); Te Tūa Whenua Māori Act 1993/Māori Land Act 1993, part 7, 1993, (N.Z.) [hereinafter *Māori Land Act*].

44. See, e.g. *The Other Brazil*, *Economist* (Nov. 20, 2008), available at http://www.economist.com/node/12641796?story_id=12641796.

45. B.S. Soares-Filho et al., *Modeling Conservation in the Amazon Basin*, 440 NATURE 520, 520 (2006).

and threaten indigenous forests. It is difficult to quantify these future risks in project-level baselines. Jurisdiction-wide accounting can make it easier to establish a baseline by focusing on overall deforestation and forest management trends in the jurisdiction instead of trying to determine the business-as-usual scenario for a specific piece of indigenous land.

C. Measuring, Monitoring, and Verification

Like all landowners, indigenous people are unlikely to invest and participate in a forest carbon project unless that participation is more economical than alternative uses of the land.⁴⁶ High transaction costs associated with MMV decrease the economic competitiveness of forest carbon projects and thus discourage participation. These transaction costs are highest for owners of small plots of land because the amount of carbon credits generated will be small while the costs associated with MMV will not be reduced.⁴⁷ Transaction costs may include lawyer's fees, payments to a certification entity, scientific inspections, and other logistical needs. Certification, monitoring, and verification are complicated procedures made easier by hiring a third-party project developer.⁴⁸ Most of these costs are accrued on the front end of the project timeline and therefore require upfront capital. However, indigenous landowners with restrictions on the alienability of their property are unable to use their property as collateral for capital.⁴⁹ Under most carbon trading schemes, landowners cannot be issued credits until emissions reductions are demonstrated. This further delays any financial returns on projects and makes upfront capital more important. Indigenous landowners must either attempt to gain the expertise to undertake MMV themselves or find another inexpensive way to get help in setting up their projects.

Aggregators are a popular way for landowners to minimize transaction costs while benefiting from professional expertise. Aggregators combine individual parcels into one project, assist with monitoring and verification, and may even provide loans for landowners

46. See Rosenthal, *supra* note 39.

47. Christopher S. Galik et al., *Transaction Costs and Forest Management Carbon Offset Potential* 8-9 (Climate Change Policy Partnership, Working Paper, 2009) (explaining that average transaction costs decrease as project size increases, due to high fixed costs and relatively low variable costs).

48. See CLIMATE ACTION RESERVE, *supra* note 20, at 5.

49. Jason Funk, *Maori Farmers Look to Environmental Markets*, ECOSYSTEM MARKETPLACE, (Jan. 24, 2006), http://www.ecosystemmarketplace.com/pages/dynamic/article.page.php?page_id=4097§ion=home&eod=1.

to do their carbon inventories.⁵⁰ The aggregator sells pooled credits on behalf of landowners in one large package. This is more attractive to purchasers of offsets, who are looking to get a large number of credits in one purchase in order to minimize transaction costs on their end.⁵¹ As payment, the aggregator takes a small fee from the carbon credits sales, thus avoiding the need for upfront payment for these expenses.⁵² Indigenous peoples could benefit from some sort of aggregation system and may even have certain institutional and marketing advantages in aggregation. These benefits will be explored within the case studies.

IV. U.S. APPROACHES TO INDIGENOUS PEOPLES AND FOREST CARBON CREDITS

In the United States, Native American land interests exist in a trust relationship with the federal government.⁵³ The federal government is the trustee and has legal title to the land while Native Americans are the beneficiaries and have equitable title.⁵⁴ As trustee, the government is obligated to act solely in the interest of the beneficiaries.⁵⁵

Traditional Native American property ownership is communal and spiritually connected to the land. Tribal land is replete with sacred places and also provides many tribes' livelihoods. For these reasons, the tribes' land bases are extremely important to them. They have fought hard to reacquire lost ancestral land and to retain the land that remains in their ownership.⁵⁶ The result is a rather piecemeal property scheme in which neighboring parcels of tribal land may be owned by different entities with different property interests.

The United States initially acquired Native American land using the Rules of Discovery and Conquest. In *Johnson v. M'Intosh*, the U.S. Supreme Court held that because Native Americans had failed to develop

50. Jessica Knoblauch, *Pacific NW Landowners Team Up to Market Forest Offsets*, GRIST (Aug. 11, 2009, 8:50 PM), <http://www.grist.org/article/2009-08-12-northwest-landowners-market-forest-offsets>.

51. COMMONWEALTH PROJECT, A LANDOWNER'S GUIDE TO CARBON SEQUESTRATION CREDITS, 9, available at http://www.cinram.umn.edu/publications/landowners_guide1.5-1.pdf.

52. *Id.*

53. Ann C. Juliano, *Conflicted Justice: The Department of Justice's Conflict of Interest in Representing Native American Tribes*, 37 GA. L. REV. 1307, 1309 (2003).

54. *Id.* at 1308–09.

55. *Id.* at 1312.

56. See, e.g., Julie Cart, *Yurok Seek Land for a Tribal Park on the North Coast*, L.A. TIMES, Dec. 26, 2010, <http://articles.latimes.com/2010/dec/26/local/la-me-redwoods-yuroks-20101226>.

their land and were still “in a state of nature,” they had no sovereign rights over that land against the conquering government.⁵⁷ Having “passed under the dominion” of another sovereign, Native Americans were thus dependent upon the United States.⁵⁸ Two sovereigns could not occupy the same land.⁵⁹ Thus, by conquest, the United States had acquired legal title to all land in the country.⁶⁰ Native Americans had a limited right of occupancy as “perpetual inhabitants,”⁶¹ subject to the federal government’s title.⁶²

The federal government entered into a number of treaties with Native American tribes in which the tribes ceded a large amount of their traditional lands in exchange for the designation of the remaining lands as reservations.⁶³ Reservations were also established in executive orders and statutes.⁶⁴ These lands are either federally owned with a beneficial interest in the tribe or tribally owned with restrictions on alienation and encumbrance.⁶⁵ For a long time, arrangements with the federal government were the only ways through which Native Americans legally gave up their land. The federal allotment policy changed this. In an attempt to assimilate Native Americans into white society and simultaneously open up more land to homesteading, the federal government divided tribal land among individual tribal members and allowed members to sell their land to non-members.⁶⁶ This policy resulted in the loss of a large amount of Native American land before the allotment ended with the Indian Reorganization Act in 1934.⁶⁷

Today, Native American land may be held in a number of legal forms. Tribal trust land is held by the government for the benefit of the

57. *Johnson and Graham’s Lessee v. McIntosh*, 21 U.S. 543, 567–68 (1823).

58. *Id.* at 568.

59. *Id.* at 567–68.

60. *See id.*

61. *Id.* at 569.

62. Juliano, *supra* note 53, at 1319.

63. *See* The Avalon Project, *Treaties between the United States and Native Americans*, YALE LAW SCH., http://avalon.law.yale.edu/subject_menus/ntreaty.asp (last visited Feb. 5, 2011).

64. *See, e.g., Executive Order - Uintah Reservation, Utah*, THE AMERICAN PRESIDENCY PROJECT, <http://www.presidency.ucsb.edu/ws/index.php?pid=76554> (last visited Feb. 5, 2011); *Fort Belknap Indian Community Official Website*, <http://www.ftbelknap-nsn.gov/> (last visited Feb. 8, 2011) (“Fort Belknap Indian Reservation was created by an Act of Congress on May 1, 1888 . . .”).

65. *Tribal and Indian Land*, *supra* note 43.

66. Indian General Allotment Act, Act of Feb. 8, 1887, ch. 119, 24 Stat. 388 (codified as amended at 25 U.S.C. §§ 331–333 (2000)) (repealed 2000).

67. *FAQs about Allotment*, INDIAN LAND TENURE FOUNDATION, <http://www.iltf.org/faq> (last visited Feb. 5, 2011).

tribe.⁶⁸ Tribal restricted fee land is held by the tribe with restrictions on alienation and encumbrance.⁶⁹ Tribes can also hold unrestricted fee land that they have purchased from private landowners.⁷⁰ Individual tribal members can also own restricted fee land or can have a beneficial interest in trust land owned by the federal government.⁷¹ These various Native American property rights illustrate the complexity that arises from the overlapping of different types of property rights on indigenous lands.

A. Permanence

Restrictions on alienation and encumbrance of tribal lands could be a barrier to participation in some programs that require conservation easements or similar transfers of property rights to ensure permanence. These requirements exist to impose a legally enforceable burden on the landowner to continue a certain type of land use. However, the unique nature of tribal land governance on tribal trust land may allow Native American projects to assure permanence in other ways. Tribal decisions to undertake a forestry project can become part of tribal laws and regulations.⁷² A tribal commitment to manage land in a certain way may therefore be more reliable than an individual landowner's commitment.

The Confederated Salish and Kootenai tribes in Montana conducted the first sale of forestry offsets on Native American lands in March 2001.⁷³ The tribes reforested 250 acres that were destroyed by fire in 1994.⁷⁴ The crediting period for this project is limited to eighty years, after which any further credits earned revert back to the tribes and may be sold to another party.⁷⁵ After the sale and reforestation, the newly planted trees died from drought and had to be replanted.⁷⁶ By replanting

68. *Tribal and Indian Land*, *supra* note 43.

69. *Id.*

70. *Id.*

71. *Id.*

72. See Jim Robbins, *Sale of Carbon Credits Helping Land-Rich, but Cash-Poor Tribes*, N.Y. TIMES, May 8, 2007, <http://www.nytimes.com/2007/05/08/science/earth/08carb.html>.

73. *Sustainable Forestry Management Purchases Greenhouse Gas Emissions Offsets from the Confederated Salish and Kootenai Tribes of Montana, USA*, Mar. 29, 2001, <http://www.midrivers.com/~epred/a2.html> [hereinafter *SFM Purchases GHG Offsets*].

74. *Id.*

75. *Carbon Cash Crop II*, PROGRESSIVE POL'Y INST. (Nov. 24, 2003), http://www.ppionline.org/ppi_ci.cfm?knlgAreaID=116&subsecID=900039&contentID=252223.

76. Robbins, *supra* note 72.

the trees, the tribes maintained the permanence of their project and its promised carbon sequestration benefits. The combination of a limited crediting period and the responsibility to make up for future reversals proves to be an effective way to address permanence without the need for an encumbrance on ownership.

The Nez Perce tribe in Idaho dealt with permanence in a manner similar to the Confederated Salish and Kootenai tribes. The Nez Perce engaged in afforestation on 400 acres of tribal land that had been used for agriculture for over seventy years.⁷⁷ The project crediting period is limited to an eighty-year commitment during which the tribe will take measures, including replanting trees if necessary, to ensure that the sequestration occurs as planned.⁷⁸

B. Additionality

The Nez Perce and Confederated Salish and Kootenai projects faced a somewhat less challenging additionality issue than that associated with avoided deforestation projects because their projects involved afforestation and reforestation.⁷⁹ Instead of having to establish a baseline deforestation rate for the area, the tribes only had to show that the forest would not have regrown in the project area had the project not been undertaken. The Nez Perce tribe proved the additionality of its project by asserting that the area had been cultivated for agricultural purposes for over seventy years, that the forest would not have naturally regenerated, and that current funding sources for forest management were inadequate for engaging in the project.⁸⁰

C. Measurement, Monitoring, and Verification

The Nez Perce and Confederated Salish and Kootenai tribes' carbon projects are relatively small, producing an estimated 172,000 metric tons of CO₂ equivalent and 48,000 metric tons of CO₂ equivalent, respectively over their project lifetimes.⁸¹ Both tribes minimized the costs associated with MMV by addressing the need for upfront capital and by taking advantage of agencies within their tribal governments.

The Confederated Salish and Kootenai tribes were able to secure

77. Brian Kummet, *Tramway Carbon Sequestration and CRP Project* (on file with author).

78. *Id.*

79. *Id.*; *SFM Purchases GHG Offsets*, *supra* note 73.

80. Kummet, *supra* note 77.

81. *Id.*; *SFM Purchases GHG Offsets*, *supra* note 73.

advance payment for the carbon offsets from their forestry projects. Sustainable Forestry Management, the buyer, paid \$50,000 upfront, which the tribes were able to use to cover the costs of reforestation.⁸² However, arrangements in which the offset purchaser will coordinate directly with the seller to arrange for upfront payment are unlikely to occur in a large-scale REDD credit trading market with multiple layers of transactions. The Nez Perce use an aggregator and are part of a national tribal carbon portfolio.⁸³ By using an aggregator that takes a contingency fee as payment instead of requiring upfront compensation, the tribe can defer some costs of MMV until it has received payment for the offsets produced. In this way, tribes can receive payment on a normal timeline after the carbon offset benefits have been demonstrated and can also pay for some of the costs of the offsets without the need for upfront capital.

Both the Nez Perce and the Confederated Salish and Kootenai tribes are taking advantage of tribal forestry departments and the expertise they have developed to engage in some of their own MMV.⁸⁴ Because tribal foresters are often more connected to and familiar with their land than outside entities, they may be better equipped to conduct MMV than a third-party monitor. The Nez Perce project will still be verified by a third party, and both projects will use MMV methodologies developed by Winrock International and others.⁸⁵

V. NEW ZEALAND'S APPROACH TO INDIGENOUS ISSUES

Unlike some Native American tribes, the Maori were already farming land when Europeans arrived.⁸⁶ Maori property was allocated on a functional rather than a geographical basis.⁸⁷ A person could own the right to use a resource in a certain way, and multiple owners might have access to the same resource for different purposes.⁸⁸ For example, if a person owned the right to cultivate a piece of land, that ownership did

82. See *SFM Purchases GHG Offsets*, *supra* note 73; PROGRESSIVE POL'Y INST., *supra* note 75.

83. Robbins, *supra* note 72.

84. See *SFM Purchases GHG Offsets*, *supra* note 73; Kummet, *supra* note 77.

85. *SFM Purchases GHG Offsets*, *supra* note 73; Kummet, *supra* note 77.

86. Stuart Banner, *Two Properties, One Land: Law and Space in Nineteenth-Century New Zealand*, 24 LAW & SOC. INQUIRY 807, 809 (1999).

87. *Id.* at 811.

88. *Id.*

not imply additional rights to that space.⁸⁹ These usufructory rights were passed down between generations as long as family-members continued to exercise the rights.⁹⁰ If a right went unused for a certain period, the right reverted back to the tribe and could then be allocated to someone else.⁹¹

Maori tribes, or *iwi*, did exert control over geographic areas as relatively sovereign territories with respect to other tribes.⁹² Chiefs enforced the property rights of their tribe-members against other members and outsiders. Land was abundant, so Maori had no reason to sell their property rights.⁹³ As a result, the Maori property system did not have any specific rules or procedures regarding property sales.

This description of the traditional Maori property system suggests that indigenous property systems may not be amenable to a forest carbon trading scheme due to their completely different conceptions of property. If a Maori property owner cultivating a piece of land wanted to switch uses to forest growth, he or she would run into barriers that might not allow such use. First of all, because the actual property right was the right to use the land for the specific purpose of cultivation, using the land for forest growth might require the acquisition of a new property right. Second, because other individuals might own property rights to use that land for different purposes, the owner seeking to grow forest would have to either get those owners to agree to use the land solely for forest growth or somehow buy them out using the underdeveloped Maori rules for sale of property. In addition, the owner would have to continue to use his or her property right in order to maintain it. If the property use were defined as the right to grow the forest itself, then there would probably be no issue with continued use. However, the property right would have to be carefully defined to ensure that forest preservation would not amount to disuse.

Overall, a traditional indigenous property system with different conceptions about the meaning of property itself could be very difficult to integrate into a forest carbon credit market. For this reason, a prerequisite to indigenous landowner participation in forest carbon credit markets may be not only a clear definition of land tenure, but a definition of tenure that fits into prevailing indigenous conceptions of what property means. Tribes whose indigenous property systems do not fit that conception may have to make drastic changes in order to participate in

89. *Id.*

90. *Id.*

91. *Id.* at 814.

92. *Id.* at 813.

93. *Id.* at 814.

carbon markets.

The British changed the traditional Maori property ownership system in their effort to colonize New Zealand and acquire land for settlement. The Treaty of Waitangi between the British Crown and Maori chiefs is considered the founding document of New Zealand.⁹⁴ Not all chiefs signed the treaty, but the British government eventually declared the treaty applicable to all chiefs, whether or not they had signed it.⁹⁵ Because of the different conceptions of property between the British and the Maori, both groups faced major language barriers. For example, the English and Maori languages did not contain words describing property conceptions understood by the other party. These language problems led to important differences between the English and Maori texts of the treaty. The first difference was that, in the English text, the Maori ceded sovereignty to the British. In the Maori text, "sovereignty" translated to "governance," and some Maori believed they would still maintain control over their affairs within the British government structure.⁹⁶ The English version also guaranteed the Maori undisturbed possession of all their properties, while the Maori version guaranteed "full authority" over "treasures," which were not always tangible.⁹⁷

Unlike the U.S. government, the British government recognized indigenous Maori property rights in the entirety of New Zealand, without regard for physical occupancy of land or improvements upon that land.⁹⁸ Recognition of indigenous property rights meant that the British had to purchase land from the Maori in order to acquire it.⁹⁹ Because tribes were the only Maori entities that dealt with geographical boundaries of land, purchasers dealt with tribes instead of individuals.¹⁰⁰ Maori were at first eager to sell land in exchange for British manufactured goods, especially because the Maori conceived of the sales as transactions within their existing property system, not the English system of absolute ownership and ability to transfer title.¹⁰¹

Between the 1840s and the late 1860s, Maori tribes gradually

94. Te Tiriti O Waitangi/The Treaty of Waitangi, Feb. 6, 1840, *available at* <http://www.nzhistory.net.nz/files/documents/treaty-kawharau-footnotes.pdf> [hereinafter Treaty of Waitangi].

95. *The Treaty in Brief*, NEW ZEALAND HISTORY ONLINE, <http://www.nzhistory.net.nz/politics/treaty/the-treaty-in-brief> (last visited Feb. 5, 2011) [hereinafter *The Treaty in Brief*]; Treaty of Waitangi, *supra* note 94.

96. *The Treaty in Brief*, *supra* note 95; Treaty of Waitangi, *supra* note 94.

97. *The Treaty in Brief*, *supra* note 95; Treaty of Waitangi, *supra* note 94.

98. Banner, *supra* note 86, at 822.

99. *Id.* at 823.

100. *Id.*

101. *Id.* at 824–26.

realized the implications of a sale in British terms.¹⁰² Eventually, the British decided that Maori were incapable of bargaining to protect their interests, and the New Zealand Supreme Court created a common law right of preemption with which the Crown could prevent private parties from purchasing Maori land.¹⁰³ This was the first restriction on the alienability of Maori property, and much more significant restrictions on alienability lay ahead.

As Maori tribes began to resist selling their land, the British sought to individualize Maori title and Anglicize the Maori property system so as to bypass the tribal resistance and facilitate sales to the British.¹⁰⁴ Thus, beginning in 1865, Maori land was divided up, and a Maori Land Court issued titles to individual tribal members.¹⁰⁵ As a result, most Maori land was sold, reducing Maori landholdings from 60 million acres in 1800 to 7 million acres in 1911.¹⁰⁶ The Maori governance structure changed along with the property system: because chiefs no longer controlled property allocation, they lost some of their power.¹⁰⁷

The Crown tried to preserve some Maori governance traditions in the Native Rights Act of 1865, which instructed colonial courts to decide cases involving Maori title according to Maori property principles.¹⁰⁸ Courts ignored this effort to give legal effect to Maori property concepts by arguing that there was no body of law outlining traditional Maori property principles and that the Act was merely meant to declare the "pre-existing rights of the natives as British subjects under the Treaty of Waitangi."¹⁰⁹ The courts' refusal to enforce traditional property rights combined with the breakdown of tribal authority over land lead to a system in which Maori property rights were essentially held in common.¹¹⁰ Tribal leaders were faced with additional legal barriers to their enforcement of traditional property rights when the Undersecretary of the Native Department advised that any Maori could legally cut timber on any land.¹¹¹ As a result, tribal leaders attempting to prevent this timber

102. *Id.* at 827–28.

103. *Id.* at 829.

104. *Id.* at 830–32.

105. *Id.* at 844.

106. *Id.* In 1990, Maori landholdings were a mere 1.3 million hectares. Robertson, *supra* note 42, at 5.

107. Banner, *supra* note 86, at 844.

108. *Id.* at 845.

109. *Id.* at 846 (citing *Mangakahia v. New Zealand Timber Co.*, 2 N.Z.L.R. 345, 351 (1882)).

110. *Id.* at 845–46.

111. *Id.* at 846–47.

cutting would be committing a crime.¹¹²

The shaky transition from a traditional Maori property system to a British system resulted in unclear title and a tragedy of the commons.¹¹³ Individual Maori sold trees from their native lands at incredibly low prices to avoid the risk of another owner in common selling those trees first.¹¹⁴ This tragedy of the commons problem and the Maori's inability to enforce property rights reinforced each other, leading to the sell-off of most Maori land.¹¹⁵

The primary modern legislation governing Maori real property is the Te Ture Wenua Maori Act of 1993, or the Maori Land Act. This Act was seen as an improvement in the Maori property system because it reemphasized the importance of Maori property traditions. Its primary objective was for Maori land to be retained by its owners to be developed and occupied by them as they wished.¹¹⁶ The Act also recognized Maori freehold land as a permanent class of tenure in New Zealand, solidifying Maori ownership over land that had remained in continuous Maori ownership and had been recognized by the Maori Land Court.¹¹⁷ The Maori Land Act sought to preserve the Maori tradition of passing land through generations, but in doing this, it created another major restriction on the alienability of Maori land.¹¹⁸

The current property system divides Maori land into three categories: Maori general land, Maori customary land, and Maori freehold land. Maori general land is land that has been acquired from the Crown in the same way as English-owned land, but all or a majority of the shares in the land are held by Maori owners.¹¹⁹ Maori customary

112. *Id.*

113. *Id.* The tragedy of the commons is a concept introduced by Garrett Hardin to describe a situation in which individuals acting in their own interest collectively destroy a resource they hold in common by overusing it. This overuse occurs because each individual can reap all the benefit of using the resource for himself while sharing the cost of the depleting resource with the whole community. Garrett Hardin, *The Tragedy of the Commons*, SCI., Dec. 13, 1968, at 1243, 1234.

114. Banner, *supra* note 86, at 847.

115. *Id.*

116. Robertson, *supra* note 42, at 4.

117. *Id.*; GARTH HARMSWORTH & TROY BAISDEN, MAKING CARBON-TRADING MECHANISMS ACCESSIBLE TO INDIGENOUS GROUPS: LESSONS FROM WORKING WITH MAORI IN NEW ZEALAND 11 (Mar. 2005), http://soilcarboncenter.k-state.edu/conference/carbon2/Baisden1_Baltimore_05.pdf.

118. CARSWELL ET AL., *supra* note 43, at 8; *see* Maori Land Act, *supra* note 43, part 7.

119. *See* Maori Land Act, *supra* note 43, part 6, sec. 129; *Maori Land*, TE RUNANGA O RAUKAWA INC., http://www.raukawa.maori.nz/pag_cms_id_172_p_m_ (last visited Feb. 8, 2011).

land—land that is held in accordance with Maori property traditions and has never been granted freehold title¹²⁰—is more problematic and less securely defined. The third category, which has already been introduced, is Maori freehold land. This land has not been out of Maori ownership, and the Maori Land Court has recognized beneficial title in it.¹²¹ Maori freehold land is better defined than Maori customary land but carries a different set of rights than Maori general land.

A. Permanence

As mentioned above, the Maori Land Act creates barriers to participation in forest carbon credit markets, particularly in relation to the permanence issue. In an attempt to give increased control over land management to Maori landowners, the Act requires Maori landowners to retain the power to determine land use.¹²² Contracts for permanent carbon credits would place strong restrictions on the use of the land, potentially violating the Maori Land Act.¹²³ One author has suggested that Maori landowners may be able to circumvent the land-use determination requirement by creating a lease contract instead of a sale contract.¹²⁴ Under the lease, the credit buyer would pay the landowner every year for continuing to protect the carbon stored.¹²⁵ The landowner would be able to back out in the future without having to repay any earned carbon credits.¹²⁶ With no liability for backing out, a lease contract could hardly be considered a restriction on an owner's use of land. However, the carbon emissions reductions benefits may be compromised by such a short-term arrangement, and buyers may be reluctant to enter into such an unstable agreement. In any case, it seems plausible that a contract for a limited term of ten to twenty years with an option for renewal would not be unlawfully restrictive of a landowner's ability to manage his or her land. Such a contract would provide at least some measure of additional reliability over a year-to-year lease.

Maori customary land provides relatively insecure title for its owners.¹²⁷ Due to the fact that the Maori Land Court has not recognized

120. See Maori Land Act, *supra* note 43, part 6, sec. 129; *What is Maori Land*, TE PUNI KŌKIRI, <http://www.tpk.govt.nz/en/services/land/maori/> (last visited Feb. 8, 2011).

121. Maori Land Act *supra* note 43, part 6, sec. 129; *Maori Land*, *supra* note 119.

122. CARSWELL ET AL., *supra* note 43, at 8.

123. *Id.* at 19.

124. *Id.* at 19–20.

125. *Id.* at 19.

126. *Id.* at 20.

127. See Robertson, *supra* note 42, at 6 (stating that not all Maori land has been surveyed, so some boundaries are uncertain).

beneficial ownership of customary land, owners of this type of land may have a difficult time guaranteeing permanence or receiving forest offset credits in general. The Maori Land Court can convert Maori customary land to Maori freehold land with a vesting order after investigating the title and determining the relative interests of the owners.¹²⁸ The Court must determine title and relative interests according to the same Maori land traditions under which the land is held.¹²⁹ In addition, applicants for a vesting order can specify particular individuals in whom the land should be vested and any restrictions to be put upon the land, such as trusts or incorporations.¹³⁰ Because this process further legitimizes Maori title while taking care to give full respect to Maori owners' wishes and property traditions, Maori landowners would benefit from pursuing vesting orders. Doing so would make it easier for them to assure long-term land-use stability and participate in REDD programs and other forest carbon credit markets.

Securing vesting orders for all Maori customary land is, of course, easier said than done. Many boundaries remain uncertain, and because the number of landowners has increased over successive generations, tracking down all the stakeholders in a parcel could be very difficult. In addition, surveyors must take care to truly incorporate standing Maori values and traditions into determining ownership and relative interests in land. Failure to do so could lead to the institutionalization of an unfavorable status for Maori landholdings.¹³¹ A long-term planning approach that gives consideration to the unique aspects of Maori ownership is essential to avoid unintended negative outcomes that could result from rushing into land allocation.¹³² However, a focus on making as much progress as possible in this area would be a productive step toward increasing Maori access to REDD programs and other forest carbon credit markets.¹³³

Maori freehold land has multiple owners.¹³⁴ The number of owners of a parcel increases with each generation because of the Maori tradition of inter-generational inheritance of rights to property and the formalization of this tradition in the Maori Land Act.¹³⁵ Coordination of

128. Maori Land Act, *supra* note 43, part 6, sec. 132.

129. *Id.*

130. *Id.*

131. Robertson, *supra* note 42, at 10.

132. *Id.*

133. *See id.* at 8 (arguing for a "thorough and comprehensive investigation" into defining Maori land parcels in order to bring them onto the same level as other New Zealand parcels).

134. *Id.* at 3; Funk, *supra* note 49.

135. Robertson, *supra* note 42, at 3; *see* CARSWELL ET AL., *supra* note 43, at 20

the interests of the owners of a parcel occurs through various ways of grouping them. Most commonly, Maori freehold land is held in one of five main types of trusts, in which trustees manage the land on behalf of the Maori beneficiaries with specific goals and purposes depending on the trust.¹³⁶ Maori freehold land may also be incorporated in a business-like structure in which shareholders maintain ownership but day-to-day affairs are managed by an elected committee or a Maori trustee.¹³⁷ Thus, while Maori land may have many owners, the number of people who actually determine the fate of the land is relatively small. Even with smaller decision-making groups like committees or trustees, disagreements still arise over how to manage and use the land.¹³⁸ Cooperation can be even more difficult due to inter-generational disagreements over ideal land use. Older Maori generations believe that clearing land to graze animals was the best use of land,¹³⁹ while current circumstances may lead younger generations to see forest preservation as a benefit for both the environment and the owners.

Achieving consensus among numerous landowners is not the only barrier to the stability and permanence of forestry projects resulting from the unique Maori title system. Maori people believe strongly in the right of self-determination of future generations and hence are hesitant to commit those generations to a particular land use in perpetuity.¹⁴⁰ Thus, even if the Maori had the legal ability to permanently alienate a right in their land to another party in an arrangement similar to a conservation easement, it is doubtful whether they would actually want to execute such an agreement.

Corporations and, possibly to a greater extent, trusts may be able to alleviate some of the apprehension about permanence because a future

(because of Maori Land Law 1993, land ownership and management of land use must remain with owners).

136. CARSWELL ET AL., *supra* note 43, at 9. Ahu Whenua trusts, the most common type, are intended to "promote and facilitate the use and administration of the land in the interests of its owners." *Id.* Whanau trusts preserve family links to land but are not managed to return dividends to the owners. *Id.* Kaitaki trusts manage the land affairs of minors or people with disabilities. *Id.* Whenua Topu trusts are tribal trusts managed in the interest of a tribe or sub-tribe, usually for land received in Treaty settlements with the Crown. *Id.* Putea trusts are for small, uneconomic interests that are pooled for the common benefit without dividends. *Id.*

137. *Id.*

138. Funk, *supra* note 49.

139. *Id.*; see also Banner, *supra* note 86, at 809 (quoting the pleased exclamation in 1819 of an English settler at seeing the large amount of forest clearing for farming purposes being carried out by the Maori).

140. Jason Funk & Suzi Kerr, *Restoring Forests Through Carbon Farming on Maori Land in New Zealand/Aotearoa*, 27 MOUNTAIN RES. & DEV. 202, 205 (2007).

reversal in forestry practices would depend upon the decision of a group with responsibilities to even more stakeholders instead of hanging on the whim of one individual landowner. Maori owners can also establish reserves for various purposes by setting aside land with spiritual, historical, or emotional significance.¹⁴¹ Reserves assure permanence in a manner similar to conservation easements because they can never be sold.¹⁴² However, Maori are still reluctant to commit land to any particular use that future generations cannot alter.

Suggested ways to account for intergenerational self-determination in forest carbon contracts include flexibility in the contracts to limit liability for reversals and to provide a way for future generations to opt out of the contract.¹⁴³ One specific way to frame such a provision would be to include an exit clause in which the value of all carbon credits earned is repaid by the owner if he or she decides to pursue another land use.¹⁴⁴ To assure the carbon integrity of such an option, carbon market rules could require purchasers of this type of credits to find other credit sources to replace those lost in case of a change in land use. The problem with this sort of program is that it complicates the crediting system. Credit buyers may not want to deal with additional obstacles such as the risk of having to repurchase credits if the original credits lose their integrity. The use of collective buffer pools into which proponents of different projects must deposit credits as a means of insurance against reversal in any one project could potentially provide another solution. However, the amount of carbon credits that must initially be deposited into a buffer pool often increases with the perceived risk of reversal.¹⁴⁵ The risk in this case could be difficult to quantify because it depends upon the desires of many people who may not even be alive yet. In reality, the risk calculation in the Maori situation may not be much more difficult than the calculation of the risk of any reversal in forest growth because, in both cases, reversal would depend upon human factors in the distant future. The uncertainty would simply be multiplied by the large number of owners.

Another possible solution, though difficult within the established legal context of Maori property, would be to create a new type of trust specifically dedicated to forest preservation. One could even imagine a trust created for the sole purpose of managing land for carbon markets.

141. *Reservations*, TE KOOTA WHENUA MAORI/MAORI LAND COURT, <http://www.justice.govt.nz/courts/maori-land-court/documents/publications/booklets/Reservations.pdf> (last visited Feb. 5, 2011).

142. *Id.*

143. Funk & Kerr, *supra* note 140, at 205.

144. *Id.*

145. CLIMATE ACTION RESERVE, *supra* note 20, at 57.

Judging by the limited number of general trusts created by the Maori Land Act,¹⁴⁶ a trust for such a singular purpose may be too specific to be incorporated into New Zealand law.

Above all, the Maori want carbon contracts that are compatible with their property system and traditions. In response to one study, Maori landowners expressed a desire for carbon contracts that take into account their ownership structures (such as trusts and incorporations), secure Maori ownership rights and control, reflect Maori values, provide a set length of contract terms, provide annual payments, allow long-term planning decisions, and provide opt-out clauses.¹⁴⁷

B. Additionality

Thirty-three percent of Maori land has been classified as indigenous forest, and the land in these indigenous forests is at risk of being cleared.¹⁴⁸ A forest carbon credit market could greatly benefit this land, and saving the land would likely provide additional emissions reduction benefits above the business-as-usual scenario. Maori forests, Maori landowners, and climate change policymakers all stand to benefit from bringing REDD programs and forest carbon credit markets to Maori land in New Zealand.

The history of Maori land management in New Zealand has been problematic, and issues from the past would need to be overcome to realize the potential of Maori land. In the past, the government has taken over management of Maori land to meet external development objectives,¹⁴⁹ and has struggled to "create programs well-suited to Maori ownership, management, and values."¹⁵⁰ Broken promises of sustainable development have created mistrust between some Maori landowners and the government.¹⁵¹ The Maori argue that instead of assuming management of the land for development purposes, the government should facilitate the development of Maori land by its owners.¹⁵² Setting a baseline for deforestation or forest management during a time of transition of control over land could be difficult.

146. See Maori Land Act, *supra* note 43.

147. HARMSWORTH & BAISDEN, *supra* note 117.

148. *Id.*

149. Robertson, *supra* note 42, at 6.

150. Funk, *supra* note 49.

151. *Id.*

152. Robertson, *supra* note 42, at 6.

C. Measuring, Monitoring, and Verification

Maori landowners face two main situations that increase the MMV costs of their participation in REDD programs and other forest carbon credit markets. First, as discussed above, the Maori Land Act places stringent restrictions on the alienability of Maori land. These restrictions prevent the Maori from using their property as collateral for loans.¹⁵³ The lack of Maori access to capital has been a source of great complaint and forces landowners to either adopt land uses with low front-end costs or somehow find another source of start-up capital for projects.¹⁵⁴

The second problem with MMV transaction costs was described above as the high transaction costs faced by small landowners seeking to go through the expensive inventory, inspection, and certification process to earn a small amount of carbon credit income. This problem is exacerbated when one small parcel of land has multiple owners. Achieving cooperation among the various decision-makers—not to mention the even more numerous owners—associated with a piece of property can be incredibly difficult and time-consuming. Aggregation in some manner will reduce the transaction costs associated with collective ownership. The current Maori property system lends itself to aggregation through trusts, reserves, and corporations. If an entity in one of these classes can be established for the purpose of forest carbon trading, the owners and decision-makers would have a common goal to help direct their decisions. Aggregation could also occur through tribal groups.

A study conducted on Maori land issues and carbon markets recommended lowering the costs of participation by reducing start-up costs for projects. Researchers provided landowners with scientific information based on models to predict carbon uptake by a particular forest.¹⁵⁵ By using these models to make their decisions on the viability of carbon credits for their income, landowners were able to avoid a costly forest assessment.¹⁵⁶ To make forest carbon projects more economically competitive, landowners combined carbon credit earnings with other forest services.¹⁵⁷ Until more compliance schemes come into effect and the price of carbon credits rises, the combination of services allows forest projects to be a more attractive option for landowners seeking income.

153. Funk, *supra* note 49.

154. Funk & Kerr, *supra* note 140, at 203.

155. *Id.* at 205.

156. *Id.*

157. *Id.* at 204–05.

VI. CONCLUSION

The experiences of indigenous peoples in the United States and New Zealand can serve as examples to help indigenous peoples in tropical forest countries work within unique property systems to successfully participate in REDD programs and other forest carbon credit markets. Certainly, an initial hurdle to landowner participation is defining land tenure. Developing countries must go about this process with due regard for long-term planning and traditional indigenous property ideas. However, the care with which surveyors must go about defining tenure should not be an excuse to postpone doing so. In countries where indigenous land tenure is clearly defined, policymakers must develop projects with the involvement of indigenous people so as to identify any issues that may arise out of a unique indigenous property system.¹⁵⁸

Policymakers must identify creative solutions to the permanence issue through contract provisions that take indigenous cultural beliefs as well as national laws and regulations into account. Short-term commitments that do not require transfer of title may be the best fit for indigenous peoples, though there are environmental and reliability costs associated with such provisions. Limited project crediting periods, such as those used by the Nez Perce and Confederated Salish and Kootenai tribes, can ensure self-determination for future generations with regard to land use.

Indigenous peoples should participate in creating the methodologies for setting forestry baselines to account for potential increased pressure on indigenous forestlands in the future. If the price of offsets is high enough, it could lead to the development of more afforestation and reforestation projects on previously agricultural land. Additionality is easier to establish in such projects, as demonstrated by the Native American tribes.

Aggregation can bring down the costs of MMV, and indigenous people are already organized into units—such as tribes—that could readily become aggregators of carbon credits on behalf of their members. In addition to aggregation, methods to reduce start-up costs and to provide additional income from the resources on forested land could make forest projects a more economically attractive option for landowners. Indigenous governmental entities that have forestry or

158. *Id.* at 205; CARSWELL ET AL., *supra* note 43, at 14 (“It will be essential in the future to carefully consider the type of organization and governance structure when designing appropriate models and policies for engaging Maori landowners in carbon trading.”).

natural resources departments should use their scientific expertise to measure and monitor carbon offset benefits in their forests.

Indigenous people face unique barriers to participation in REDD programs and other forest carbon credit markets due to peculiar or nonexistent property systems and rights. However, policymakers, governments, and indigenous peoples can overcome these barriers with careful planning and cooperation. The benefits to be had by all parties make such efforts well worth the effort.