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FOREST CARBON OFFSETS AND INTERNATIONAL LAW: A DEEP EQUITY LEGAL ANALYSIS

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ABBREVIATIONS

CBD	Convention on Biological Diversity
CBDR	Common but Differentiated Responsibilities
CCB	Climate, Community, and Biodiversity Alliance
CDCF	Community Development Carbon Fund
CDM	Clean Development Mechanism
CEDAW	Convention on the Elimination of all Forms of Discrimination Against Women
CER	Certified Emissions Reduction
CERD	Convention on the Elimination of All Forms of Racial Discrimination
COP	Conference of Parties
CRC	Convention on the Rights of the Child
DNA	Designated National Authority
EIA	Environmental Impact Assessment
GHG	Greenhouse Gas
ICCPR	International Covenant on Civil and Political Rights
ICESC	International Covenant on Economic, Social, and Cultural Rights
IEL	International Environmental Law
IHRL	International Human Rights Law
IFI	International Financial Institution
ITTO	International Timber Trade Organization
KP	Kyoto Protocol
LULUCF	Land Use, Land-Use Change and Forestry Land Use, Land-Use Change and Forestry
MDGs	Millennium Development Goals
MEA	Multilateral Environmental Agreement
MNE	Multinational Enterprise
NGO	Nongovernmental Organization
PDD	Project Design Document
REDD	Reducing Emissions from Deforestation and Degradation
UNFCCC	United Nations Framework Convention on Climate Change

I. INTRODUCTION

A. Overview of the Article

Northern citizens, governments, and businesses are investing billions of dollars in the vast, imperiled forests of the South.¹ In a forest carbon project, a **523** developer plants trees to reforest a degraded ecosystem or preserves a forest that would have otherwise been degraded or felled. The developer can then sell the carbon, now sequestered in the trees and underground biomass, for a contracted period of time.²

Forest carbon projects are legally problematic. In this article, I will first introduce the elements of forest carbon projects and the legal debates they engender. I introduce the notion of “deep equity,” the concept that provides an aegis for my analysis. I then briefly describe the entwined problems of global climate change and deforestation. I review the legal regime formulated to ameliorate these problems. I explain forest carbon schemes under both international treaties and the voluntary market. I then examine principles of equity, drawn from multilateral environmental agreements (MEAs), customary international environmental law (IEL), and international human rights law (IHRL) obligations that are implicated in forest carbon investments. After introducing each right or principle, I explain how forest carbon projects may or may not advance the right and propose a set of standards for what an ideal project—one that maximizes deep equity—would include. I briefly analyze how international law is currently ill-equipped to regulate these projects, as many of the important actors elude legal control, in part because they are not explicitly named as duty bearers or because neither home nor host countries are able or willing to enforce legal requirements that do exist. I conclude by discussing how international law should be reformed so that forest carbon investments cleave to legal standards that promote genuine adaptation through deep equity, i.e. sustainable individual, community, and ecological health and potential.

B. Forest Carbon Projects: A Solution to All Problems, or a Problem that Eludes All Solutions?

Forest carbon projects help mitigate global climate change when they store more carbon than would be emitted by the polluting activities they enable. Such projects may also help communities adapt. Climate change endangers survival of many species in forest ecosystems and threatens to impair how those ecosystems function.³ Intact forests provide ecological resiliency for human communities: they help communities prosper because they buffer floods, filter drinking water, stabilize soil, prevent drought, harbor pollinators, provide food, medicine, and building products, and preserve countless other ecosystem services necessary for **524** human survival.⁴

Forest carbon investments may also foment socioeconomic climate change adaptation through new sources of income (from carbon credits or employment), new forestry-related skills,⁵ ancillary project benefits (e.g., project

1. I use “North” to refer to developed or industrialized nations. Northern nations have been primarily responsible for creating the problems of global climate change through pollution associated with industrialization; as we will see below, in section IV.A.2: Common But Differentiated Responsibilities (CBDR), Northern nations are thus the only nations with binding greenhouse gas reduction commitments under the Kyoto Protocol. “Southern” nations are those in the process of development; Southern nations are least responsible for creating global climate change, yet will suffer the most from its consequences.
2. See DAVID TAKACS, *FOREST CARBON: LAW + PROPERTY RIGHTS* 14 (Conservation International 2009) (providing details of various property arrangements for forest carbon).
3. Charlotte Streck, et al., *Climate Change and Forestry: An Introduction*, in *CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES* 55 (Charlotte Streck, et al., eds., 2008).
4. I am not referring to preserving functioning ecosystems and their component species for their own sake; while this is ethical and desirable, and is the subject of other MEAs, it is not the focus of the legal climate regime. UNITED NATIONS ENVIRONMENTAL PROGRAMME, *REDUCING EMISSIONS FROM DEFORESTATION: A KEY OPPORTUNITY FOR ATTAINING MULTIPLE BENEFITS*, 9-10 (2007) (prepared by Valerie Kapos, Peter Herkenrath & Lera Miles) [Hereinafter *REDUCING EMISSIONS*]; Stefano Pagiola, et al., *Market-based Mechanisms for Forest Conservation and Development* in *SELLING FOREST ENVIRONMENTAL SERVICES: MARKET-BASED MECHANISMS FOR CONSERVATION AND DEVELOPMENT* 2 (Stefano Pagiola et al., eds. 2002); See CERSPA, *GUIDANCE DOCUMENT* (2009), available at <http://www.cerspa.org>; David Freestone, *Foreword*, in *CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES* et al., *supra* note 3 at xii.
5. Richard Tipper, *Helping Indigenous Farmers to Participate in the International Market for Carbon Services: The Case of Scolel Té*, in *SELLING FOREST ENVIRONMENTAL SERVICES: MARKET-BASED MECHANISMS FOR FOREST CONSERVATION AND DEVELOPMENT*, *supra* note 4, at 232.

developers building schools or clinics), or clear land title.⁶ They may assist with institutional adaptation by helping develop skills and institutions so that communities or nations can more effectively decide development priorities, negotiate effectively with project developers, or develop and manage their own forest carbon projects.⁷

Despite all of these potential benefits, critics claim that forest carbon investments do little to mitigate global climate change and are instead anti-democratic, human rights-impairing schemes that allow the already rich to profit at the expense of the poor. Skeptics paint lose-lose situations, as Northern consumers assuage guilty consciences over profligate lifestyles while corporations mine profits from a scheme supposedly meant to save the planet, but actually sustaining hydrocarbon-based capitalism as usual. Critics allege that poorly planned forest carbon projects in the South may bar poor people from traditional land, leading them to lose money, become refugees, or starve.⁸

525 Though decried by critics, a coalition of businesspeople, international financial institutions (IFIs), Northern and Southern government leaders, environmental non-governmental organizations (NGOs), and pro-poor NGOs have joined forces to promote forest carbon projects.⁹ At the international level, projects that reforest land or that reduce emissions from deforestation and degradation (REDD) will likely be expanded if negotiators succeed in formulating a post-2012 successor to the Kyoto Protocol (KP) as part of the Clean Development Mechanism (CDM) or similar instrument that allows Northern nations to offset required emissions reductions by investing in sustainable development projects in the South.¹⁰ The recent Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCCC) agreed on little else but the need to increase efforts to invest in forest carbon, and Northern nations have pledged US\$3.5 billion to help Southern nations build capacity in REDD.¹¹ At the federal level, pending legislation in the U.S. Congress would impose greenhouse gas (GHG) reduction goals, and allow forest carbon offsets as a means to meet those goals.¹² And at the state level, California's landmark

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6. Carina Bracer et al., *Organization and Governance for Fostering Pro-Poor Compensation for Environmental Services: CES Scoping Study Issue Paper no. 4*, ICRAF Working Paper no. 39, 35 (World Agroforestry Centre 2007); See Brian Walsh, *Getting Credit for Saving Trees*, TIME, July 23, 2007; Alfred Ofosu-Ahenkorah, *CDM Participation and Credit Pricing in Africa*, in EQUAL EXCHANGE: DETERMINING A FAIR PRICE FOR CARBON 133 (Glenn Hodes & Sami Kamel, eds., 2007); THE KATOOMBA GROUP, GETTING STARTED: AN INTRODUCTORY PRIMER TO ASSESSING AND DEVELOPING PAYMENTS FOR ECOSYSTEM SERVICE DEALS 10 (2008); See WILLIAM D. SUNDERLIN, ET AL., FROM EXCLUSION TO OWNERSHIP? CHALLENGES AND OPPORTUNITIES IN ADVANCING FOREST TENURE REFORM 29-30 (Rights and Resources Initiative 2008); See LORENZO COTULA & JAMES MAYERS, TENURE IN REDD: START-POINT OR AFTERTHOUGHT? 3-4 (IIED 2009); Julian Quan with Nat Dyer, *Climate Change and Land Tenure: The Implications of Climate Change for Land Tenure and Land Policy* 36 (IIED and Natural Resources Institute, University of Greenwich, Land Tenure Working Paper 2 2008).
 7. Patricia Nelson, *An African Dimension to the Clean Development Mechanism: Finding a Path to Sustainable Development in the Energy Sector*, 32 DENV. J. INT'L. L. & POL'Y 615, 623 (2004); Ofosu-Ahenkorah, *supra* note 6, at 133.
 8. One 2009 review cites 144 REDD initiatives underway: COTULA & MAYERS, *supra* note 6, at 1; DILYS ROE ET AL., CLIMATE, CARBON, CONSERVATION, AND COMMUNITIES: AN IIED/WWF BRIEFING 1 (2007), available at <http://www.iied.org/pubs/pdfs/17011IIED.pdf>; LARRY LOHMANN, CARBON TRADING: A CRITICAL CONVERSATION ON CLIMATE CHANGE, PRIVATISATION, AND POWER 230-33 (2006); TOM GRIFFITHS, SEEING "REDD"? "AVOIDED DEFORESTATION" AND THE RIGHTS OF INDIGENOUS PEOPLES AND LOCAL COMMUNITIES 14, available at http://www.forestpeoples.org/documents/ifi_igo/avoided_deforestation_redjun07_eng.pdf; http://www.forestpeoples.org/documents/ifi_igo/avoided_deforestation_redjun07_eng.pdf; DAVID HUMPHREYS, LOGJAM: DEFORESTATION AND THE CRISIS OF GLOBAL GOVERNANCE 208 (2006); FERN, Climate Change: the Forest Connection, http://www.fern.org/campaign_area.html?id=6 (last visited Feb. 1, 2010).
 9. James Kanter, *In London's Financial World, Carbon Trading is the Next Big Thing*, N.Y. TIMES, July 6, 2007.
 10. Peter C. Gelling and Andrew Revkin, *Delegates in Bali for Talks on Climate Change*, N.Y. TIMES, Dec. 2, 2007; Peter Gelling, *Forest Loss in Sumatra Becomes a Global Issue*, N.Y. TIMES, Dec. 6, 2007, at A14. COTULA & MAYERS, *supra* note 6, at 2.
 11. See, e.g., Copenhagen Accord, Decision -/CP.15, Dec. 18, 2009, available at http://unfccc.int/files/meetings/cop_15/application/pdf/cop15_cph_auv.pdf; Ad Hoc Working Group on Long Term Cooperative Action Under The Framework Convention on Climate Change, *Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention*, Addendum, Draft Decision -/CP.15, Copenhagen, Denmark, Dec. 15, 2009, available at <http://unfccc.int/resource/docs/2009/awglca8/eng/107a06.pdf>; Alyssa Moir, "There Must be a Pony in here Somewhere: Progress in Copenhagen on Reducing Emissions From Deforestation", MARTENS LAW GROUP, Dec. 23, 2009, available at <http://www.martenlaw.com/news/?20091223-emissions-from-deforestation>; Maria Bendana, *What Does Copenhagen Mean for the Private Sector in REDD-plus*, FOREST CARBON PORTAL Jan. 4, 2010, available at <http://www.forestcarbonportal.com/article.php?item=1243>.
 12. American Clean Energy and Security Act, H.R. 2454 §§ 751-756 (2009).

Global Warming Solutions Act will allow 49% of the required emissions to be offset and forest carbon will likely be an attractive option.¹³ The governors of California, Wisconsin, and Illinois have signed a Memorandum of Understanding with the governors of four Brazilian states and two Indonesian provinces to cooperate on forest carbon projects.¹⁴ The voluntary market in forest offsets is booming, becoming a multibillion-dollar enterprise.

526 C. Deep Equity and Forest Carbon Projects

Forest carbon projects seem ineluctable. Thus the more cogent question becomes: how might we maximize their potential to help communities adapt to the ravages of global climate change? Herein I describe what might be done to ensure that forest carbon investments live up to their potential of promoting a deeply equitable world. By “deep equity,” I mean values, actions, and laws promoting sustainable pathways that act in synergy to maximize the health and potential of all individuals, communities, and ecosystems. The equity is deep because it asks that values become rooted within each individual. It is also deep because it requires that we fundamentally re-imagine our community structures and responsibilities, and entrench and encode these values and responsibilities in our legal systems and policy choices. Our laws and policies would, in turn, support values and actions promoting even deeper equity.

Deep equity is my umbrella term for all of the principles I discuss in this article. When using forest carbon projects as a means of adaptation, deep equity means simultaneously promoting individual, community, and ecosystem health in present and future generations.¹⁵ It requires distributive justice to promote such equity.¹⁶ It recognizes that past injustices have led to present inequity—between North and South, between elites and non-elites within a nation, and between indigenous and non-indigenous groups—and thus state and private entities have a common but differentiated responsibility to advance equity.¹⁷ Deep equity recognizes that human rights must be respected, protected, and fulfilled if individuals and communities are to maximize their potential.¹⁸ It requires that concerned citizens participate in environmental decision-making, and that nonhuman species and ecosystems have proxies who speak for their interests.¹⁹ It recognizes that indigenous groups have often been treated inequitably even within Southern nations and require special treatment to ensure justice.²⁰ Deep equity requires that states and private actors minimize and mitigate their pollution, so that all individuals, communities, and ecosystems may thrive.²¹

Herein I develop a legal framework for forest project proponents who wish to promote deeply equitable adaptation. The framework simultaneously respects the rule of law while promoting basic dignity for those who risk finding themselves **527** on the losing end both of the ravages of and solutions to global climate change. For those interested in a deeply equitable world, IHRL provides one set of analytical tools through which to examine, develop, and enforce the legal and ethical obligations of forest carbon project actors. Principles of IEL—both encoded in treaties and statutes, and emerging through custom—also cover areas of equity that impose legal and ethical obligations on actors. I use these principles to examine what project participants must and should do. In the final sections, I analyze why both home countries of project developers, and host countries of projects, may decline to police these investments, and how international law might change to regulate forest carbon so that its deep equity potential may be maximized.

The deep equity legal standards I propose here serve at least three purposes. First, where international treaty law and domestic positive law are unambiguous, I analyze what is *legally required* of all forest carbon actors. I take the position that projects that do not meet most or all of these standards should be discouraged or reformulated and those that meet these standards should be promoted. Second, because treaty law lacks enforcement teeth,

13. CALIFORNIA AIR RESOURCES BOARD (CARB), CLIMATE CHANGE PROPOSED SCOPING PLAN 57 (2008).

14. Press Release, Gov. Schwarzenegger Partners with Other States to Reduce Greenhouse Gas Emissions from Deforestation (Nov. 18 2008), *available at* <http://gov.ca.gov/press-release/11101/>.

15. *See, e.g., infra* section on Sustainable Development, at § IV.A.3.

16. *See, e.g., infra* sections on Sustainable Development and Common but Differentiated Responsibilities, at §§ IV.A.3 and § IV.A.2.

17. *See, e.g., infra* sections on Common but Differentiated Responsibilities and Indigenous Peoples’ Rights, at §§ IV.A.2 and IV.B.4.

18. *See, e.g., infra* sections on Human Rights, including Environmental Human Rights, at § IV.B.

19. *See, e.g., infra* sections on Environmental Democracy, Sustainable Development, and Indigenous People’s Rights, at §§ IV.A.5, IV.A.3, and IV.B.4.

20. *See, e.g., infra* section on Indigenous Peoples’ Rights, at IV.B.4.

21. *See, e.g., infra* section on Preventative and Polluter Pays Principles, at IV.A.4.

because domestic law may fail when faced with powerful international actors, and because customary principals of IEL often lie in unsettled legal gray areas.²² I offer a set of best practices and principles of deep equity for government leaders, community members, and project developers who wish to develop forest carbon adaptation projects that cleave to the most capacious reading of international law, and thus choose to maximize human rights and equity. Even where law does not unambiguously require adherence to certain principles, they are nonetheless available for those who would err on the side of protecting the most vulnerable.

Third, I offer guidelines for project developers who want to develop forest carbon projects that are maximally sustainable because they help communities adapt. Sustainable forest carbon projects are: “1) effective, i.e., they work without complication and deliver and maintain desired carbon benefits over the long term; 2) synergistic, i.e., they maximize benefits for all communities, biodiversity, climate, and investors; and 3) equitable, i.e., gaps between rich and poor narrow” as a result of the project.²³ While some reforms I promote here are costly, I believe carbon marketed from these projects would fetch premium prices precisely because buyers wish to invest in projects that respect, protect, and fulfill human rights and deepen equity, rather than exacerbate inequity. Furthermore, providing alternate means of livelihood to forest-dependent people means greater local buy-in—and thus greater stability, and greater profitability for all actors.²⁴ I hope that the forest carbon market eventually embraces the principles I name here **528** as legal requirements.

D. Forest Carbon and the Problem(s) of International Law

Forest carbon schemes reveal lacunae where neither domestic law nor international law protect the most vulnerable, and where actors may believe they bear no legal duties and face no legal liability for potentially human rights-violating, equity-impairing acts. Law may fail to protect the most marginalized human and nonhuman communities from the triple threat of 1) global climate change, 2) deforestation, and 3) those who would profit economically from growing concern over these scourges.²⁵ Currently, forest carbon projects float in legal IHRL and IEL limbo. International meetings may allude to “principles of equity and fairness”²⁶ that must be respected, but do not detail what these are, nor how these principles are to be observed, nor hint that legal obligations may already define these principles. Advocates call for “social impact assessments” or “minimum standards” for “stakeholder consultation,” but fail to name precisely what they mean.²⁷ The emerging set of competing voluntary standards urge compliance with national laws but do not reference international legal principles. I have yet to find a set of standards that acknowledges IHRL or IEL obligations; certain standards do not even mention the climate change treaties. Even when some of the best-intentioned efforts to advocate pro-poor forest carbon investments (or other schemes to pay for environmental services) mention law, they may refer only to the domestic contract or property law of the host nation.²⁸ These advocates overlook that international law often constrains or names what governments or individuals may do.

Forest carbon projects highlight international law’s preoccupation with the state as duty bearer, whereas private actors, IFIs, or NGOs may have a greater impact on human rights and equity, for better or worse. These projects illustrate the difficulties of regulating actions that take place across territorial boundaries, actions that seem to elude both international and domestic law (whether of host or home state). By examining the ways that international law could improve forest carbon investments, I will point to ways these projects could help international law evolve to promote greater equity in all legal arenas.

22. For example, private actors developing projects have unclear status as duty bearers in international law; both home and host countries may have ambiguous legal requirements.

23. For a fuller explanation, see TAKACS, *supra* note 2, at 11.

24. SUNDERLIN et al., *supra* note 6, at 37.

25. David Takacs, *Carbon Into Gold: Forest Carbon Offsets, Climate Change Adaptation, and International Law*, 15 HASTINGS W-NW J. ENVTL L. & POL’Y 39, 84-87 (2009).

26. U.N. Framework Convention on Climate Change, Subsidiary Body for Scientific and Technological Advice, *Report on the second workshop on reducing emissions from deforestation in developing countries*, ¶44, U.N. Doc. FCCC/SBSTA/2007/3 (May 18, 2007).

27. See, e.g., CENTER FOR INTERNATIONAL FORESTRY RESEARCH (CIFOR), INFOBRIEF: MAKING FOREST MARKETS WORK FOR LOW-INCOME PRODUCERS 2 (2002).

28. See, e.g., Bracer et al., *supra* note 6, at 35; Meine van Noordwijk, et al., *Criteria and Indicators for Environmental Service Compensation and Reward Mechanisms: Realistic, Voluntary, Conditional and ProPoor* 35 (World Agroforestry Centre, ICRAF Working Paper No. 37, 2007).

529 II. BACKGROUND

A. Global Climate Change, Tropical Deforestation, and the Poor

GHG pollution of the global atmospheric commons is a serious by-product of industrialization. As GHGs amass in the atmosphere at alarming levels, scientists predict dire consequences for human and nonhuman communities.²⁹ Concerned citizens and political leaders are responding to these alarms, pressing for measures to mitigate the problem and to adapt to those changes that cannot be prevented.

Forests store half the Earth's terrestrial carbon pool.³⁰ Forests are important globally for their role in mitigating climate change. They are important locally for adaptation to unpreventable climate changes. The Earth lost about 8.9 million hectares of forest per year during the 1990s, and has lost about 7.3 million hectares per year in the past decade, mostly in the tropics; such rates of deforestation continue.³¹ Tropical deforestation accounts for about 17-20% of GHG emissions.³² Deforestation from Indonesia and Brazil alone is equal to 80% of the GHG emissions savings achieved if all nations with required emissions reductions under the KP meet their targets in the 2008-2012 commitment period.³³

Climate change and deforestation hit the poor especially hard.³⁴ Many poor **530** individuals, communities, and nations lack the economic, technical, political, and institutional resources to adapt to deepening drought, crop pattern changes, intensified storms, floods from melting glaciers, and rising sea levels. The UNFCCC Art. 4.4 specifies that the "developed country Parties ... shall also 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."³⁵ A deeply equitable world requires immediate action to mitigate GHG emissions, and thus prevent climate change from widening gaps between rich and poor; it requires that the rich help the poor adapt to the ravages that have already been set in motion by climate change and cannot be stopped through mitigation.

29. See, e.g., *Joint Science Academies' Statement: Climate Change Adaptation and the Transition to a Low Carbon Society*, June 2008, available at <http://www.nationalacademies.org/includes/climatechangestatement.pdf> (statement posted by the National Science Academies of 13 nations, including those of the G-8); Tom Zeller Jr., *A High Cost to Deal with Climate Shift*, N.Y. TIMES, Aug. 30, 2009; Intergovernmental Panel on Climate Change, *Chairman's Vision Paper* (AR5 Scoping Meeting, July 13—17 2009) available at http://www.ipcc.ch/scoping_meeting_ar5/documents/doc02.pdf.

30. REDUCING EMISSIONS, *supra* note 6, at 4.

31. FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS, GLOBAL FOREST RESOURCES ASSESSMENT (2005); Pagiola et al., *supra* note 6, at 1; Robert O'Sullivan, *Reducing Emissions from Deforestation in Developing Countries: An Introduction*, in CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES, *supra* note 5, at 179.

32. See, REDUCING EMISSIONS, *supra* note 6, at 4, (stating that deforestation is responsible for 18-25% of GHG emissions); UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP), HUMAN DEVELOPMENT REPORT 2007/2008: FIGHTING CLIMATE CHANGE: HUMAN SOLIDARITY IN A DIVIDED WORLD 41 (New York, 2007) [hereinafter HUMAN DEVELOPMENT REPORT 2007/2008] (stating that deforestation is responsible for 11-18% of GHG emissions); COTULA & MAYERS, *supra* note 6, at v (stating that deforestation is responsible for 17% of GHG emissions); H.R. 2454 *supra* note 12 at § 752(2) (stating that deforestation is responsible for 20% of GHG emissions).

33. Márcio Santilli, et al., *Tropical Deforestation and the Kyoto Protocol: A New Proposal* 5 (COP-9, Milan, Dec 1-12, 2003); HUMAN DEVELOPMENT REPORT 2007/2008, *supra* note 31, at 42.

34. Nelson, *supra* note 7, at 615-16, 619; RODA VERHEYEN, CLIMATE CHANGE DAMAGE AND INTERNATIONAL LAW: PREVENTION AND RESPONSIBILITY 34 (2005); M.J. Mace, *Adaptation Under the UN Framework Convention on Climate Change: The Legal Framework* 48 (presented at Justice in Adaptation to Climate Change Seminar, Zuckerman Institute for Connective Environmental Research University of East Anglia, Sept. 7-9, 2003); Andrew C. Revkin, *Poor Nations to Bear Brunt as World Warms*, N.Y. TIMES, April 1, 2007; KENNETH M. CHOMITZ ET AL., AT LOGGERHEADS?: AGRICULTURAL EXPANSION, POVERTY REDUCTION, AND TROPICAL FORESTS (2007); HUMAN DEVELOPMENT REPORT 2007/2008, *supra* note 32, at 8.

35. United Nations Framework Convention on Climate Change, art. 4.4, art. 4.9, May 9, 1992, 1771 U.N.T.S. 107, 31 I.L.M. 849 (entered into force Mar. 21, 1994) [hereinafter UNFCCC]. Art 4.9 reiterates that "The Parties shall take full account of the specific needs and special situations of the least developed countries in their actions with regard to funding and transfer of technology."

B. The Global Climate Change Legal Regime

By signing the UNFCCC, the world's nations pledged to reduce their GHG emissions in order to mitigate global climate change.³⁶ The KP, ratified by all developed nations except the United States, names the terms that legally bind signatories.³⁷ Northern nations have been overwhelmingly responsible for anthropogenic GHG accumulation, and their economic development has provided them the financial and technological resources to act now to mitigate this pollution and to help nations with fewer resources adapt. This notion of common but differentiated responsibility (CBDR), which I will explain further in section IV.A.2, is an underlying legal and ethical principle of the climate treaties. Between 2008 and 2012, Northern nations must decrease GHG emissions by at least 5% below 1990 levels.³⁸ Under the KP, Southern nations have no required GHG reduction targets, but nonetheless share common commitments to curb climate change.³⁹

Northern nations can escape real reductions to emissions through a variety of flexibility mechanisms. These are meant to be “supplemental” to “significant” domestic actions, although the treaties' Conference of Parties (COP) has not defined these terms.⁴⁰ Northern nations may trade emissions credits among 531 themselves,⁴¹ or invest in CDM projects in the South.⁴² The CDM encourages Northern nations to transfer clean technology and wealth to Southern nations to help the latter develop sustainably, while allowing Northern nations to offset their emissions requirements inexpensively.⁴³

Private actors may, and do, generate projects under the CDM. They may use CDM projects to offset government-imposed emission reduction requirements, or they can profit financially by selling or trading credits to other actors (private or governmental) who must meet emissions reduction targets or who voluntarily offset their emissions.⁴⁴ Private actors generated US\$30 billion per year worth of CDM projects in the two years after entry into force of the KP.⁴⁵

The KP requires that part of CDM funds be used “to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.”⁴⁶ The COP set this as a 2% fee of all certified emissions reductions (CERs) generated by CDM projects.⁴⁷ The CDM's Adaptation Fund is expected to bring in US\$80-300 million per year between 2008 and 2012.⁴⁸ This money is much needed. But twelve years after the KP was established, and four years after it has gone into effect, parties have made scant progress on guidelines for appropriate use of the Adaptation Fund.⁴⁹ The standards I propose here point towards existing IHRL and IEL parties should heed when formulating guidelines.

36. *Id.*

37. Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, 37 I.L.M. 22. The newly elected Prime Minister of Australia, Kevin Rudd, signed the Kyoto Protocol as his first act of office on 3 December 2007, leaving the United States alone among the North in failing to ratify the KP. *Australian Leader Ratifies Kyoto Pact*, Reuters, Dec. 3 2007, available at <http://www.reuters.com/article/idUSSYD3784520071203>.

38. Christopher Carr & Flavia Rosembuj, *Flexible Mechanisms for Climate Change Compliance: Emission Offset Purchases Under the Clean Development Mechanism*, 16 N.Y.U. ENVTL. L.J. 44, 46 (2008); Kevin Baumert, *Participation of Developing Countries in the International Climate Change Regime: Lessons for the Future*, 38 GEO. WASH. INT'L L. REV. 365, 373 (2006).

39. Baumert, *supra* note 40, at 381.

40. PHILIPPE CULLET, DIFFERENTIAL TREATMENT IN INTERNATIONAL ENVIRONMENTAL LAW 117 (2003); United Nations Framework Convention on Climate Change (UNFCCC), Mechanisms under the Kyoto Protocol: Emissions Trading, the Clean Development Mechanism and Joint Implementation, http://unfccc.int/kyoto_protocol/mechanisms/items/1673.php (last visited Feb. 2, 2010).

41. Kyoto Protocol, *supra* note 37, art. 17; Anita M. Halvorssen, *Common, But Differentiated Commitments in the Future Climate Change Regime - Amending the Kyoto Protocol to Include Annex C and the Annex C Mitigation Fund*, 18 COLO. J. INT'L ENVTL. L. & POL'Y 247, 257 (2007).

42. Kyoto Protocol, *supra* note 37, art. 6.

43. Ian H. Rowlands, *Atmosphere and Outerspace*, in THE OXFORD HANDBOOK OF INTERNATIONAL LAW 315, 331 (Bodansky et al. 2007).

44. Carr & Rosembuj, *supra* note 38, at 48.

45. Carr & Rosembuj, *supra* note 38, at 50.

46. Kyoto Protocol, *supra* note 37, art. 12.8.

47. UNFCCC, Adaptation Fund, http://unfccc.int/cooperation_and_support/financial_mechanism/items/3659.php (last visited Feb. 2, 2010); FARHANA YAMIN, CLIMATE CHANGE AND CARBON MARKETS 30 (2005).

48. UNFCCC, Report of the Adaption Fund Board, U.N. FCCC/KP/CMP/2009/14 (Nov. 14 2009) at ¶ 41, available at <http://unfccc.int/resource/docs/2009/cmp5/eng/14.pdf>.

49. The Bali Action Plan calls for enhanced action on adaptation, including all the basic steps one would have expected to have occurred long ago. UNFCCC COP 13, *Bali Action Plan* (2008), available at http://unfccc.int/files/meetings/cop_13/application/pdf/cp_bali_action.pdf.

Nor have adaptation efforts taken off outside the auspices of the formal climate change treaty regime. Although at COP-15 Northern nations' made new promises of adaptation aid, thus far Northern nations have spent only about US\$40 million per year in voluntary aid to help Southern nations adapt, while spending about US\$40 billion per year helping themselves adapt.⁵⁰ Kevin Watkins, of the United Nations Human Development Report Office, notes that this "borders on the derisory,"⁵¹ and Archbishop Desmond Tutu calls this "climate change apartheid."⁵²

No overarching MEA governs international forest protection in a fashion analogous to the UNFCCC legal guidance on global climate change. The U.N. General Assembly has adopted a "Non-legally Binding Instrument on All Types of Forest," a statement of soft law seeking to guide international action to prevent deforestation and to provide forest-based benefits for local people and financial assistance for forest preservation.⁵³ The ILO Convention 169, Convention on Biological Diversity (CBD), Ramsar Convention on Wetlands, and the U.N. Convention to Combat Desertification all have added treaty law to forest management.⁵⁴ The International Tropical Timber Agreement (ITTA) focuses on long-term forest sustainability while encouraging timber trade.⁵⁵ Various other U.N. declarations (including the Millennium Development Goals (MDGs) and the Johannesburg Plan of Implementation from the 2002 World Summit on Sustainable Development), World Bank policy, and voluntary standards (such as the Forest Stewardship Council's standards⁵⁶) act as a patchwork of principles for the management of international forests. Continuously staggering rates of deforestation render the results of this legal patchwork unimpressive.⁵⁷

C. Forest Carbon Projects

Forest carbon project developers reforest degraded ecosystems, or preserve extant forests that otherwise would be destroyed or degraded. The developer can then sell the carbon, now sequestered in the trees and underground biomass, for a **533** contracted period of time.⁵⁸ Buyers include nations who must meet required emissions reductions under the KP and private entities whose governments impose emissions reductions on them but whose profits depend on GHG emissions and thus wish to continue to pollute in exchange for cheaper carbon storage elsewhere. Businesses and organizations that desire a green image also invest in forest carbon,⁵⁹ as do consumers who voluntarily offset their carbon footprint by investing in stored carbon, and carbon brokers who sell carbon credits for profit to any of the above entities.⁶⁰ Projects that prevent deforestation are currently excluded from CDM

50. Andrew Revkin, *Poor Nations to Bear Brunt as World Warms*, N.Y. TIMES, March 31, 2007. At the recent COP, U.S. Secretary of State Hillary Clinton proposed that Northern nations would invest \$US100 billion annually in an adaptation fund, although no binding promise has emerged from this proposal. Lisa Friedman & Darren Samuleson, *Hillary Clinton Pledges \$100B for Developing Countries*, NEW YORK TIMES, 17 Dec. 2009.

51. Revkin, *supra* note 50.

52. HUMAN DEVELOPMENT REPORT 2007/2008, *supra* note 32, at 166.

53. Non-Legally Binding Instrument on All Types of Forests 21, UNFF 2007 A/C.2/62/1.5 (Oct. 22, 2007) [hereinafter Non-Legally Binding].

54. Convention on Biological Diversity, Rio de Janeiro, June 5, 1992, 1760 U.N.T.S. 79, available at <http://www.cbd.int/convention/convention.shtml>; Ramsar Convention on Wetlands, Ramsar, Feb 2, 1971, 996 U.N.T.S. 245, available at http://www.ramsar.org/key_conv_e.html; International Labour Organization Convention 169: Convention Concerning Indigenous and Tribal Peoples in Independent Countries, June 27, 1989, 28 I.L.M. 1382 (entered into force Sept. 5, 1991); UN Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (UNCCD), June 17, 1994, 1954 U.N.T.S. 3.

55. REDUCING EMISSIONS, *supra* note 4, at 6.

56. FSC, About the Forest Stewardship Council, <http://www.fsc.org/about-fsc.html> (last visited Feb. 1, 2010).

57. HUMPHREYS, *supra* note 8, at 114-15; REDUCING EMISSIONS, *supra* note 4, at 5; Steven Bernstein & Benjain Cashore, *Non-State Global Governance: Is Forest Certification a Legitimate Alternative to a Global Forest Convention?* in HARD CHOICES, SOFT LAW: VOLUNTARY STANDARDS IN GLOBAL TRADE, ENVIRONMENT AND SOCIAL GOVERNANCE 42 (John J. Kirton & Michael J. Trebilcock, eds., 2004).

58. Details of various property arrangements for forest carbon are available in TAKACS, *supra* note 2.

59. Katherine Hamilton, et al., *Carving a Niche for Forests in the Voluntary Carbon Markets*, in CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES, *supra* note 3, at 293.

60. Kanter, *supra* note 9; CLEAN AIR - COOL PLANET, A CONSUMER'S GUIDE TO RETAIL OFFSET PROVIDERS iii (2006), available at <http://www.cleanair-coolplanet.org/ConsumersGuidetoCarbonOffsets.pdf>; KATHERINE HALMILTON ET AL., FORTIFYING THE FOUNDATION: STATE OF THE VOLUNTARY CARBON MARKETS 2009 ix, available at http://ecosystemmarketplace.com/documents/cms_documents/StateOfTheVoluntaryCarbonMarkets_2009.pdf.

eligibility.⁶¹ However, reforestation projects are permitted.⁶² Only thirteen such projects have thus far been registered, but others await approval.⁶³ However, the successor agreement to the KP (if there is one) is likely to include expanded REDD eligibility.⁶⁴ Pending U.S. climate legislation encourages offsets for reforestation or avoided deforestation.⁶⁵

Outside the UNFCCC and KP, voluntary markets in carbon offsets are thriving.⁶⁶ Forests are the most prevalent source of carbon offsetting in the voluntary market, in part because, as one study notes, “[p]eople like trees.”⁶⁷ In 2008, Merrill Lynch became the first Wall Street firm to invest seriously in forest carbon, spending US\$9 million to preserve 768,000 hectares of forest in Sumatra.⁶⁸ In 2008, the voluntary market for carbon offsets brought in US\$705 million, more than double the year before.⁶⁹ That figure could grow to US\$40 billion by 2010, and experts forecast that the carbon industry will eventually grow to US\$200 billion per year or more within a decade.⁷⁰ As of 2006, more than 30 **534** companies sold carbon offsets.⁷¹ Hundreds more are in the carbon offset business as brokers, retailers, developers, wholesalers, or consultants.⁷²

The 2006 *Stern Review on the Economics of Climate Change* cites avoided deforestation as the cheapest way to offset GHG emissions.⁷³ To serve the market of those who wish to offset their emissions cheaply and/or reap profit in the process, as Pagiola et al. note, “costs and risks must be minimized” and forest project owners may compete with each other by lowering prices to attract investors.⁷⁴ The forests of the South offer an alluring financial and ecological sink for Northern investors because they allow Northern entities to continue hydrocarbon-intensive business-as-usual while paying poor governments and people to reforest or keep their forests intact.⁷⁵

Forest carbon investments advance deep equity to the extent that they help bring forth rapid, real reductions in GHG emissions that slow the advent of climate change, i.e., they *mitigate* GHG emissions.⁷⁶ This paper, however, is not about GHG *mitigation* per se.⁷⁷ Offsets are GHG reductions or removals that counterbalance a continued emission of equal magnitude elsewhere. Forest carbon investments may not only fail to mitigate GHG build-up—

61. ANGELA CROOKS, FINANCING CLIMATE ADAPTATION AND MITIGATION IN RURAL AREAS OF DEVELOPING COUNTRIES 7 (USAID 2009).

62. *Id.*

63. CDM, Distribution of Registered Project Activities by Scope, <http://cdm.unfccc.int/Statistics/Registration/RegisteredProjByScopePieChart.html> (last visited Feb. 1, 2010); *See* TAKACS, *supra* note 2, at 23 (for discussion of the first CDM forest project).

64. *See, e.g.*, UNFCCC *supra* note 35; Gelling, *supra* note 10; Freestone, *supra* note 4, at ix; Streck et al., *supra* note 3, at 7.

65. H.R. 2454, *supra* note 12.

66. ROE ET AL., *supra* note 8, at 2.

67. Hamilton et al., *supra* note 60, at 292; Marisa Meizlish & David Brand, *Developing Forestry Carbon Projects for the Voluntary Carbon Market: A Practical Analysis*, in CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES, *supra* note 3, at 311.

68. Marc Gunther, *Merrill Lynch's Carbon Bet*, CNNMoney.com, Apr. 18, 2008, available at http://money.cnn.com/2008/04/17/technology/carbon_farming.fortune/?postversion=2008041808.

69. HAMILTON ET AL., *supra* note 59, at ii.

70. Kanter, *supra* note 9.

71. CLEAN AIR - COOL PLANET, *supra* note 60, at i.

72. *Id.* at iii; Mark Meyrick, *What is a Fair Price for CDM Credits? in EQUAL EXCHANGE: DETERMINING A FAIR PRICE FOR CARBON*, *supra* note 6, at 101-02.

73. Streck et al., *supra* note 3, at 4.

74. Pagiola et al., *supra* note 4, at 267.

75. ROE ET AL., *supra* note 8, at 2; Stefano Pagiola, et al., *Making Market-based Mechanisms Work for Forests and People*, in SELLING FOREST ENVIRONMENTAL SERVICES: MARKET-BASED MECHANISMS FOR FOREST CONSERVATION AND DEVELOPMENT, *supra* note 4, at 267.

76. *See* UNFCCC, *supra* note 35, at art. 2.

77. For an analysis of global climate change, mitigation, and human rights, *see* Sara C. Aminzadeh, *A Moral Imperative: The Human Rights Implications of Climate Change*, 30 *Hastings Int'l & Comp. L. Rev.* 231 (2007); Hari M. Osofsky, *Learning from Environmental Justice: A New Model for International Environmental Rights*, 24 *STAN. ENVTL. L.J.* 71 (2005).

they may increase GHG emissions.⁷⁸ Here, however, I analyze forest carbon projects as **535** climate change *adaptation* and the direct effects they have on the communities in which they operate. A project that redistributes wealth (accrued through GHG pollution) from richer to poorer communities may help the latter *adapt* and create a more equitable world where rights are advanced for more of the planet's current and future citizens.

While so much is at stake in forest carbon investments—global profits, local livelihoods, and human and ecological community survival—little formal domestic or international law regulates the actors who have much to lose and to gain. While validation as a CDM project requires complicated technical calculations about carbon storage,⁷⁹ the standards for what counts as sustainable development or for what project participants must do to ensure socioeconomic benefits of local communities are poorly developed.⁸⁰ The approved methodologies for reforestation for CDM projects do not include social or human rights criteria.⁸¹ CDM projects must take into account comments of local participants, but need not heed them nor cancel a project if local opposition is strong.

Voluntary market offsets are not subject to mandatory international regulations. Into this breach launches a number of private initiatives designed, and sometimes competing, to regulate these projects. The social and environmental standard generated by the Climate, Community & Biodiversity Alliance (CCB) are among the most rigorous, and self-billed as “the most widely used and respected international standard(s),” with eighteen projects being validated and dozens more in the pipeline.⁸² CCB comprises a coalition of NGOs (e.g. TNC, Wildlife Conservation Society, CARE), research institutions, and corporations.⁸³ The latter includes BP, Intel, SC Johnson, and Weyerhaeuser, and carbon-related businesses that stand to profit from forest carbon projects, such as Sustainable Forestry Management⁸⁴ and GFA Consulting Group.⁸⁵ Groups like TNC or CARE wish to implement some form of regulation that supports their goals—e.g., preserving biodiversity or alleviating poverty. Carbon businesses may **536** accept such voluntary regulation in order to advertise their corporate social responsibility to consumers, and/or to show that industry can regulate itself, thus obviating the need for more formal legal strictures.⁸⁶

The CCB seeks to “deliver credible and significant climate, community, and biodiversity benefits in an integrated and sustainable manner” and thereby “minimize risks by identifying high-quality projects that are unlikely to

78. Skeptics claim that these projects have problems with *leakage* (communities that formerly relied upon a forest are likely to cut trees elsewhere; a government may preserve one forest from logging and instead offer timber concessions elsewhere; logging companies denied concession rights in one country may instead cut timber in a neighboring country), Imke Sagemüller, *Forest Sinks Under the United Nations Framework Convention on Climate Change and the Kyoto Protocol: Opportunity or Risk for Biodiversity*, 31 COLUM. J. ENVTL. L. 189, 195-96 (2006); Nelson, *supra* note 7, at 645; Johannes Ebeling, *Risks and Criticisms of Forestry-Based Climate Change Mitigation and Carbon Trading*, in CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES, *supra* note 3 at 50-51; Forest Carbon Partnership Facility [FCPF], Concept Note 4, www.forestcarbonpartnership.org (last visited Feb. 1, 2010); Gary C. Bryner, *Carbon Markets: Reducing Greenhouse Gas Emissions Through Emissions Trading* 17 Tul. Envtl. L.J. 267, 291 (2004); *permanence* (forests burn or get chopped down), CULLET, *supra* note 40, at 124; Ebeling, *supra*, at 47; *quantifiability* (projects pose technical challenges of calculating present and future carbon stored in forests, particularly under different climate change scenarios) Brian Walsh, *Getting Credit for Saving Trees*, TIME, July 23, 2007; Baumert, *supra* note 38, at 404; and *additionality* (project developers must show the project would not have been undertaken but for the project. When such additionality is false - as it has been shown to be in as many as 20% of CDM projects — they result in a net increase in GHG emissions). Meizlish & Brand, *supra* note 67, at 317; LOHMANN, *supra* note 8, at 145; Sebastian M. Scholz & Martina Jung, *Forestry Projects under the Clean Development Mechanism and Joint Implementation: Rules and Regulations*, in CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES, *supra* note 3, at 76-77. Thus, forest carbon schemes may not mitigate climate change, and may increase GHG emissions.

79. Scholz & Jung, *supra* note 78, at 76-77.

80. Baumert, *supra* note 38, at 399.

81. See UNFCCC, Approved A/R Methodologies, http://cdm.unfccc.int/methodologies/ARmethodologies/approved_ar.html (last visited Feb. 4, 2010) (no mention of social or human rights tools).

82. CCB, CLIMATE, COMMUNITY, & BIODIVERSITY PROJECT DESIGN STANDARDS 4, (2d ed., 2008), available at <http://www.climate-standards.org/standards/thestandards.html>, at 4; CCB, CCB Projects, <http://www.climate-standards.org/projects/index.html> (last visited Feb. 3, 2010).

83. CCB, Members, <http://www.climate-standards.org/who/partgroups.html> (last visited Feb. 3, 2010).

84. Whose “principal revenues will be derived from supplying and trading carbon dioxide emission credits and offsets in the carbon market and from the harvest of environmentally certified timber,” Ecosystem Marketplace, Sustainable Forestry Management Limited, http://www.ecosystemmarketplace.com/pages/dynamic/organization.page.php?page_id=982§ion=directory&eod=1 (last visited Feb. 3, 2010).

85. Whose business dealings include forest certification and carbon brokerage and advising. GFA Consulting Group, http://www.gfa-group.de/indices/home_index_sgf_953162.html (last visited Feb. 1, 2010).

86. Jason Morrison & Naomi Roht-Arriaza, *Private and Quasi-Private Standard Setting*, in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW, *supra* note 43, at 504; PETER T. MUCHLINSKI, MULTINATIONAL ENTERPRISES AND THE LAW 567 (2007).

become implicated in controversy.”⁸⁷ Like other environmental certification schemes (e.g., the Forest Stewardship Council’s sustainable timber certification), project proponents hope that by using these standards they can promote stability and connote quality, and thus command premium prices from sophisticated consumers.⁸⁸ For example, the CCB standards guided Merrill Lynch’s Sumatra deal, in which the company invests in “exceptional, high-quality (and resilient) projects most likely to avoid implementation roadblocks and deliver their stated outcome, including generating credible and robust carbon offsets.”⁸⁹

Investments in forest carbon are not going away. Norway, for example, has announced plans to spend over US\$600 million per year on carbon offsets in forestry projects in the nation’s attempt to be carbon neutral by 2030.⁹⁰ The recent COP UNFCCC conference in Copenhagen’s only success may be the progress made in promoting Northern aid for southern REDD projects.⁹¹ In the United States, particularly in California, climate change statutes present a potential bonanza for forest carbon investments.⁹² The strong alliance of business, research, humanitarian organizations, and environmental groups collaborating on forest carbon schemes show how normally antagonistic players are investing their hopes and dreams in swatches of forest still hanging on in the developing world, or still to be (re)created in that same world.

Forest carbon investments have enormous potential to wield powerful influence on how human and ecological communities are configured in distant lands. The following analysis envisions a set of guidelines that would provide maximum prosperity for forest-dependent communities while setting the highest possible legal standards.

527 III. FOREST CARBON PROJECTS AND PRINCIPLES OF DEEP EQUITY

In the following sections, I describe various legal principles that I believe should guide forest carbon investments. I point out the various principles of IHRL encoded in treaties and covenants, and I discuss emerging principles of customary International Environmental Law (IEL). In some cases, as in IHRL, the precepts bind home and host nations when engaging in or regulating forest carbon projects. But in other cases, as in customary principals or in treaty law involving non-governmental actors, it is less certain that a given principal will apply to a particular actor in a specific forest carbon context.

I do not argue that every highlighted principle dictates legal obligations to every actor in every situation. I am more concerned with laying out a framework for how forest carbon investments, with so much potential for advancing deep equity, might live up to that promise in an ideal world. Carbon is a new commodity and forest carbon projects are a new way of capitalizing on that commodity; we are still in a period of trial and error. This section is a toolkit for constructing forest carbon deals that adopt the most generous reading possible of international law, and in so doing, help fulfill forest carbon’s potential for advancing simultaneously individual, community, and ecological health and potential.

A. International Environmental Law

1. Introduction to Customary International Environmental Law (IEL)

In this section I lay out principles that are emerging in customary IEL, included in international and regional conventions, national constitutions and legislation, and international and domestic legal opinions.⁹³ Unlike formal

87. CCB, *supra* note 82, at 6-7.

88. *Id.*; Morrison & Roht-Arriaza, *supra* note 86, at 504; see Forest Stewardship Council, <http://www.fsc.org/> (last visited Feb. 1, 2010).

89. *Local Communities: Raising the Bar for Carbon Forestry Projects*, BUSINESS, 2010 NEWSLETTER: CLIMATE CHANGE (Convention on Biological Diversity, Montreal) May 2007, available at <http://www.cbd.int/doc/newsletters/news-biz-2007-05/?articleid=109>.

90. *Norway Plans Record 2010 Carbon Capture Spending*, REUTERS, Oct. 13, 2009.

91. See Copenhagen Accord, *supra* note 11; Friedman and Samuelson, *supra* note 50.

92. H.R. 2454, *supra* note 12; CARB, *supra* note 13.

93. For a good review, see Pierre-Marie Dupuy, *Customary Law and General Principles* 449-53, in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW, *supra* note 43, at 449, 453. Dupuy states that “customary international environmental law is both omnipresent and of paramount importance.”

treaty obligations, such as those that bind signatories to the major human rights instruments, these principles float in soft law legal limbo, wielding moral persuasion, but not conclusively conferring legal obligations. Several of these principles codify principles of deep equity where IEL coincides with IHRL and commitment to the environment dovetails with commitment to social justice.

Monographs could be written debating the customary status of the norms I discuss in this section, attempting to clear away the “utter confusion” in the legal status and implications of these norms.⁹⁴ These debates are not within my bailiwick. No matter what their precise legal status, these principles can and do **538** have normative effect. I simply urge that state, organizational, and individual actors in forest carbon projects who seek the maximum, synergistic, deep equity results interpret these norms in an ethically and legally expansive way. I am not arguing that such actors are currently required to follow my interpretations, but that it is ethically preferable that they do. Furthermore, I assert that maximum sustainability for individuals, communities, ecosystems and international investors will result if all actors adopt a generous reading of these norms.

2. *Common But Differentiated Responsibilities (CBDR)*

The Principle: CBDR is cited as an emerging principle of customary IEL,⁹⁵ and is the ethical and legal anchor of the UNFCCC and the KP, as proclaimed in the UNFCCC’s Art. 3:

The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof.⁹⁶

CBDR requires that all nations mitigate climate change and contribute to adaptation efforts, but requires Northern nations to make greater contributions.⁹⁷ The climate change conventions’ *legal* obligations stem from pragmatic reality rooted in ethical obligation. *Pragmatically*, only some nations have financial resources to mitigate and help others adapt; *ethically*, those resources come from economic development, the excesses of which foul(ed) the global atmospheric commons. Developed nations, thus, bear the primary responsibility to clean up and help others adapt to the pollution they have caused as they have achieved economic prosperity.⁹⁸

How forest carbon projects could contribute or detract here: Projects that genuinely mitigate Northern emissions while helping the South adapt to global climate change adhere to CBDR. However, projects that allow Northern nations to evade reducing their own emissions and further undercut the South’s ability to adapt violate CBDR’s equity prescriptions. It is important to note that Southern **539** nations also have CBDR obligations under the climate treaties. While they have no binding emissions reduction targets, they must still work to mitigate climate change. They must establish Designated National Authorities (DNAs) who will assist CDM project developers and will approve (or not) all proposed CDM projects, according to the nation’s sustainable development criteria.⁹⁹ In section V.C: Host States as Duty Bearers, I discuss why DNAs may be unable or unwilling to fulfill their legal duties.

What an ideal forest carbon project would look for/include/seek to do: The KP permits private actors to participate in the CDM, but it remains murky whether they are “Parties” who are required to operate within the CBDR framework that guides state actors.¹⁰⁰ Nonetheless, CBDR is available to guide project developers, and some

94. *Id.* at 452-53; Ulrich Beyerlin, *Policies, Principles, and Rules*, in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW, *supra* note 43, at 433.; Daniel Bodansky, *Customary (and Not So Customary) International Environmental Law*, 3 IND. J. GLOBAL LEGAL STUD. 105 (1995).

95. CULLET, *supra* note 40, at 88-89 (contending that CBDR is not now, but may soon be, a customary principle); SUMUDU A. ATAPATTU, EMERGING PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW 435 (2006) (contending that CBDR is not yet a customary principle, and has no application outside of express language in various MEAs); Beyerlin, *supra* note 94, at 442.

96. UNFCCC, *supra* note 35, art. 3(1); Lavanya Rajamani, *The Nature, Promise, and Limits of Differential Treatment in the Climate Regime* 16 Y.B. INT’L ENVTL. L. 81, 93 (2005); Kyoto Protocol, *supra* note 37, art 10, art. 10(c).

97. CULLET, *supra* note 40, at 87.

98. Philippe Cullet & Annie Patricia Kameri-Mbote, *Activities Implemented Jointly in the Forestry Sector: Conceptual and Operational Fallacies*, 10 Geo. Int’l Envtl. L. Rev. 98, 102-03 (1997); Halvorssen, *supra* note 41 at 254; Rajamani, *supra* note 96, at 89.

99. KAREN CAPOOR & PHILIPPE AMBROSI, STATE AND TRENDS OF THE CARBON MARKET 2006: A FOCUS ON AFRICA 23, 24 (World Bank 2006); Ebeling, *supra* note 78, at 54.

100. Kyoto Protocol, *supra* note 38, arts. 1.6, 12.9 (Article 1.6 states that “‘Party’ means, unless the context otherwise indicates, a Party to this Protocol.”)

carbon brokers have adopted it as a fundamental principle.¹⁰¹ But by allowing private actors to conduct forest projects (and other CDM projects) as profit-making offsets, the KP implicitly sanctions a reverse CBDR: the rich in the North may disproportionately benefit through continuing to engage in activities that generate profit while emitting GHGs, such as selling and trading carbon credits, selling lumber after the project terminates, and pursuing ancillary business opportunities they gain through establishing a presence in a community.¹⁰² While the CCB 2008 standards require “net positive impacts on the social and economic well-being of communities,”¹⁰³ that does not prevent distant wealthy communities from profiting even more than local communities.

To respect CBDR means finding ways to preclude the rich from getting richer at the expense of the poor through forest carbon investments.¹⁰⁴ Offsets under the formal treaty regime should be above all real, quantifiable, and verifiable, with stricter restrictions on Northern industries that are primarily responsible for these emissions, as well as real, quantifiable, and verifiable restrictions on citizen consumers who demand the products that lead industries to pollute. Only after wealthy nations have achieved their GHG reduction targets would investors be able to invest in offsets. Southern communities (as opposed to Northern project developers) should hold the disproportionate share of carbon credits and should disproportionately benefit economically. This also means they should not bear a disproportionate share of the burden if the project fails to produce the contracted 540 credits.¹⁰⁵ Quite simply, every project should leave the poorer party disproportionately better off than it leaves the wealthier party; gaps between rich and poor should narrow, not widen.

Lack of resources influences the ability to negotiate fair projects, both locally at the project level and globally when negotiating treaties and rulemaking.¹⁰⁶ Thus “honest brokers”¹⁰⁷ or ombudspersons should always be present (and funded by project developers) to help ensure that poor communities and individuals disproportionately benefit from projects. Aid should be provided in global negotiations to make sure poor peoples’ interests are disproportionately represented in treaty negotiations and rulemaking.

3. Sustainable Development

CBDR is an ethical and legal principle that provides a rationale to efforts to promote sustainable development.

The Principle: Sustainable development includes the following four elements: 1) economic, social, and environmental policies are *integrated*; 2) the needs of the poor are given priority and the gap between rich and poor is narrowed (*intra-generational equity*); 3) the needs of future generations are considered (*inter-generational equity*);¹⁰⁸ and 4) “nature is the true infrastructure of society” and thus ecosystem services are preserved for the needs of present and future generations (usually of humans).¹⁰⁹

No single definition of “sustainable development” exists and it is unclear whether it is yet a customary, legally binding principle.¹¹⁰ Therefore it is difficult to derive policy standards against which one could measure an action in its name or hold an actor legally responsible for not fulfilling responsibilities.¹¹¹ However, we can examine particular forest carbon schemes to see if they narrow the gap between rich and poor in the present generation, to predict if they are likely to narrow that gap in future generations, and to see whether they are likely to sustain functioning ecosystems necessary for human prosperity.

101. See, e.g., THE CARBON NEUTRAL COMPANY, THE CARBONNEUTRAL PROTOCOL: A FRAMEWORK FOR EFFECTIVE ACTION ON CLIMATE CHANGE 19 (2006), available at <http://www.carbonneutral.com/pages/cnprotocol.asp>.

102. CAPOOR & AMBROSI, *supra* note 99, at 25; Takacs, *supra* note 25, at 70-77, (details the many actors who are profiting financially from forest carbon projects).

103. CCB, *supra* note 82, at 25.

104. See also proposals listed in the intra- and inter-generational equity sections, *infra*.

105. KATOOMBA GROUP, *supra* note 6, at 13.

106. Mace, *supra* note 34, at 5.

107. KATOOMBA GROUP, *supra* note 6, at 13.

108. I could discuss intra- and inter-generational equity as separate principles of customary IEL but I discuss it here because most discussions/definitions of “sustainable development” emphasize the intra- and intergenerational equity components. In fact, “sustainable development” is so protean that much of what I discuss here could fall under its aegis.

109. Daniel Barstow Magraw & Lisa D. Hawke, *Sustainable Development*, in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW, *supra* note 43, at 619-20.

110. ATAPATTU, *supra* note 95, at 182-94, offers an extensive review of the debate around the precise legal status of sustainable development, and concludes that while it may not have achieved customary legal status it nonetheless has “a distinct quality under international law” as an influential norm that guides policy.

111. Nelson, *supra* note 7, at 622-24; Mindy G. Nigoff, *The Clean Development Mechanism: Does the Current Structure Facilitate Kyoto Protocol Compliance?*, 18 Geo. Int'l Envtl. L. Rev. 249, 256 (2006).

541 The UNFCCC and KP repeatedly refer to Southern nations' primary interest in "sustainable development."¹¹² The UNFCCC's Art. 3(4) asserts that "[t]he Parties have a right to, and should, promote sustainable development," in both mitigation and adaptation.¹¹³ Art. 4(7) of the UNFCCC states, "economic and social development and poverty eradication are the first and overriding priorities of the developing country Parties."¹¹⁴ The KP's Art. 10 requires parties to "advance the implementation of these commitments in order to achieve sustainable development."¹¹⁵ Forest offsets under the CDM should thus further the social development needs of local populations while preserving the natural environment on which that development depends.

Climate change exacerbates poverty and widens the gap between rich and poor.¹¹⁶ The UNDP argues that climate change can hamper achievement of the MDGs, but smart CDM carbon investments can advance those goals.¹¹⁷ The World Bank argues that greater investment in forestry preservation—under the Bank's auspices—can address poverty reduction and sustainable environmental management.¹¹⁸ While Southern nations' first priority in negotiating the KP and in setting up the CDM was to commit the North to mitigating climate change through sustainable development,¹¹⁹ the principle could be used *against* Southern nations who wish to exploit their forests (seen as objects of "common concern to humankind") to alleviate poverty if such exploitation is not sustainable.¹²⁰

Yet promoters of CDM and voluntary offsets argue that projects to conserve forest carbon could transfer vast sums of money for ecologically sensitive, poverty-alleviating development in Southern nations.¹²¹ Such investments may indeed contribute to sustainable development, but ill-conceived, market-driven choices may also emerge.¹²² The KP does not bind private investors, and thus they are not legally required to respect the fundamental goals of sustainable development.¹²³ Given that Northern nations and private actors have strong financial incentives to invest in these schemes in the cheapest, most efficient way 542 possible, observers worry that sustainable development gets lost in the shuffle.¹²⁴ Furthermore, some stakeholders are concerned more about traditional environmental values than they are about alleviating poverty. Economic development may be pushed aside in favor of maximizing carbon savings or biodiversity preservation.¹²⁵

If signatories to the KP are legally bound to advance sustainable development, forest carbon projects are not legal unless they are stringently designed and monitored to achieve such goals. While the DNAs of host countries are responsible for monitoring projects' sustainable development criteria, they are often unable or unlikely to fulfill their monitoring responsibilities.¹²⁶

For forest carbon developers to advance deep equity, they should carefully plan projects that address the sustainable development goals of Southern governments and communities. Of sustainable development's four elements, I spend particular time in this section discussing the principles of intragenerational and intergenerational equity.

Economic, social, and environmental policies must be *integrated*: Rio's Principle 4 avers, "environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it."¹²⁷ Deeply equitable projects that promote sustainable development would use ecosystem protection or restoration to

112. UNFCCC, *supra* note 35, art. 3.5; Kyoto Protocol, *supra* note 37, art. 2.1, art. 10, art. 12.2; Nelson, *supra* note 7, at 622.

113. UNFCCC, *supra* note 35, art. 3.4; Mace, *supra* note 34, at 48.

114. UNFCCC, *supra* note 35, art. 4(7).

115. Kyoto Protocol, *supra* note 37, art. 10.

116. HUMAN DEVELOPMENT REPORT 2007/2008, *supra* note 32, at 8 and throughout (the 2007 Human Development Report is primarily dedicated to the links between (un)sustainable development and (un)mitigated global climate change).

117. *Id.* at 155.

118. WORLD BANK, SUSTAINING FORESTS: A DEVELOPMENT STRATEGY 1 (Washington, D.C., 2004).

119. Nelson, *supra* note 7, at 620, 622; Baumert, *supra* note 38, at 381.

120. A. Dan Tarlock, *Exclusive Sovereignty Versus Sustainable Development of a Shared Resource: The Dilemma of Latin American Rain Forest Management*, 32 TEX. INT'L L.J. 37, 65 (1997).

121. *See, e.g.*, Santilli et al., *supra* note 33, at 4-5.

122. Cullet & Kameri-Mbote, *supra* note 98, at 99.

123. Nelson, *supra* note 7, at 636.

124. Eriika Melkas, *Equitable as Equal: The Kyoto Protocol Project Based Flexibility Mechanisms in an Unequal World* 9 INT'L COMMUNITY L. REV. 263, 276 (2007).

125. *See, e.g.*, GRIFFITHS, *supra* note 8, at 5.

126. *See* section V.C: Host States as Duty Bearers, below

127. United Nations Conference on Environment and Development, Rio Declaration on Environment and Development Principle 4, June 14, 1992, U.N. Doc. A/CONE.151/5/Rev. 1 [hereinafter *Rio Declaration*].

advance the economic needs of poor communities. Proper projects would foment adaptation by strengthening individual and community economic, social, and institutional stability through healthy forests.¹²⁸ Ecosystem services upon which poor communities depend would be bolstered and sustainable access to these services would be guaranteed.¹²⁹ Communities whose material condition is improved through forest carbon investments would, in turn, be less likely to undercut the forests that sustain them.

The needs of the poorest humans must be given first priority and the gap between rich and poor must narrow: this is the principle of *intra-generational equity*. First, forest carbon projects should narrow the gap between rich and poor nations.¹³⁰ Interpreted through the legal context of CDDR, forest carbon schemes should foster sustainable development that narrows, not widens, the gap between rich people in the North and poor people in the South. Projects should be preferentially proposed, managed, and owned by the poor in the South, who **543** would benefit materially from the resulting credits. The CCB's standards require that communities must be better off as a result of projects it certifies—but that still allows the Northern project developer to gain even more.¹³¹

Forest carbon projects should also narrow the gap between Southern nations. While the CDM was meant to benefit a wide range of Southern nations, China, India, Mexico and Brazil have attracted more than 80% of CDM projects.¹³² China alone has generated about 50% of the projects representing 60% of the volume of CERs between 2002-2006.¹³³ China's advanced infrastructure is well equipped to undertake the bureaucratic and technical requirements of the CDM, and private actors are eager to gain footholds in lucrative Chinese markets.¹³⁴ Investors have largely bypassed African nations, which lack the institutional infrastructure to cope with the regulatory complexity of CDM projects and to supervise projects effectively.¹³⁵

To remedy this, I propose more unilateral CDM projects within African, and other poor nations. The CCB 2008 Gold Standard requires that projects be initiated in poorer countries or in a relatively poor area of wealthier countries.¹³⁶ CIFOR suggests a corps of international advisors to help relatively unsophisticated nations or communities adapt social and institutional structures to build the capacity to reap financial benefits of forest carbon.¹³⁷ Opening up simplified REDD or small agroforestry projects for CDM eligibility would decrease inequity because such projects “are relatively accessible to the poor,” requiring less sophisticated institutional or technological infrastructure.¹³⁸ Cullet suggests a “multilateral clearing house” to distribute CDM projects equitably.¹³⁹ If a project occurs in a nation that disproportionately receives CDM or voluntary market projects, those proposing the project should explain why they are operating there and how they are balancing their projects between nations. If it is not possible to favor poorer nations or regions, developers should be compelled to contribute some proportion of their project proceeds earned in richer nations to those less equipped to adapt to climate change.

Projects should narrow the gap between members of a community. Forest carbon investments may exclude the very poor, those lacking land title, smallholders who cannot afford to give up land, women, and other marginalized groups.¹⁴⁰ **544** To remedy this, eligibility requirements and participation should include the poorest of the poor.¹⁴¹ Pro-poor “honest brokers” should help negotiate on behalf of the most marginalized.¹⁴² Developers should train poor community members in professional skills that enhance livelihoods even after the project is completed.¹⁴³

128. For example, as was touted by the World Bank in the FCPF, *supra* note 78, at 8.

129. FCPF, *supra* note 78, at 14.

130. GRIFFITHS, *supra* note 8, at 5; ATAPATTU, *supra* note 97, at 79.

131. CCB, *supra* note 82, at 25.

132. UNEP Risoe Centre, CDM Projects by Host Region, <http://cdmpipeline.org/cdm-projects-region.htm> (last visited Feb. 2, 2010).

133. *Id.*

134. Carr & Rosembuj, *supra* note 38, at 53.

135. Ofosu-Ahenkorah, *supra* note 6, at 129.

136. CCB, *supra* note 82, at 34.

137. CIFOR, *supra* note 27, at 3.

138. CIFOR, *supra* note 27, at 1, 4; Pagiola et al., *supra* note 74, at 283.

139. CULLET, *supra* note 40, at 121.

140. Brent Swallow et al., *Localizing Demand and Supply of Environmental Services: Interactions with Property Rights, Collective Action, and the Welfare of the Poor* 26, 32 (International Food Policy Research Institute, CAPRI Working Paper #42, 2005); KATOOMBA GROUP, *supra* note 6, at 50, 60; Quan, *supra* note 6, at 34, 36; COTULA & MAYERS, *supra* note 6, at 5.

141. Bracer et al., *supra* note 6 (providing a detailed analysis for how to structure pro-poor payments for environmental services contracts); CCB, *supra* note 82, at 34.

142. KATOOMBA GROUP, *supra* note 6, at 13, 15.

143. Tipper, *supra* note 5, at 232.

Rather than being “neutral,” projects should be aggressively pro-poor, pro-female, and pro-landless.¹⁴⁴ Social Impact Assessments conducted in partnership with affected communities should be required to ensure that investments reduce inequities within communities.¹⁴⁵ It should be clear within a community how benefits will be equitably allocated, and these terms should be expressed in all contracts.¹⁴⁶

The CCB’s 2008 standards require that projects provide net positive benefits for “the social and economic well-being of communities and ensure that costs and benefits are equitably shared among community members and constituent groups during the project lifetime.”¹⁴⁷ Those standards also provide a number of reference tools for judging the benefits.¹⁴⁸ To reach the Gold Standard, the CCB 2008 criteria requires that at least 50% of households within the poorest quartile benefit substantially from the project, that barriers to the flow of benefits to poor households are removed, and that any poor households that might suffer are adequately compensated.¹⁴⁹ These should be required elements of all forest carbon investments.

Forest carbon investments should not widen the gap between communities that receive fair compensation and those that do not. Conversely, projects should not exclude some forest-dependent communities from their forests while others still derive sustenance from those forests. While the CCB 2008 standards require that developers document and mitigate possible negative impacts to communities outside the project zone,¹⁵⁰ it is still possible that some communities will benefit and some will not, just as in traditional development assistance.

While some observers urge prioritizing communities with organized infrastructure,¹⁵¹ this could exacerbate inequities between communities. Instead, investments⁵⁴⁵ should work to build institutional adaptation in communities that development projects traditionally bypass. Nations or regions should consider establishing or working within pre-existing inter-village organizations to cooperatively plan forest carbon projects.¹⁵²

Projects may be captured by national elites, exacerbating intranational inequity.¹⁵³ Other protections named here protect against this, but certainly a nation’s DNA should scrutinize investments to see who within and outside of the nation is disproportionately benefiting.

Unless the money finds its way into the hands of those who depend on forest resources, forest carbon projects can impoverish citizens.¹⁵⁴ The CCB requires monitoring for livelihood benefits to ward against this form of intragenerational inequity.¹⁵⁵ Simple micro-insurance tools should be employed so that failed schemes do not leave rural communities poorer than when they started.¹⁵⁶

Other forms of development aid may be reduced in favor of forest carbon projects, leaving nations and local people no better off than they were before.¹⁵⁷ Commentators assert that the CDM precludes diverting other types of development aid into CDM projects.¹⁵⁸ Northern leaders should pledge against this.

Deforestation through logging or agricultural expansion may actually alleviate poverty in the short term. Forest carbon projects should compensate for lost opportunity costs for other forms of development.¹⁵⁹ To mitigate lost income from avoided deforestation, projects may include direct payments to citizens, or payment in the form of

144. Van Noordwijk et al., *supra* note 28, at 48.

145. CIFOR, *supra* note 27, at 2; ATAPATTU, *supra* note 95, at 295.

146. KATOOMBA GROUP, *supra* note 6, at 43; CECILIA LUTREIX ET AL., FORESTRY BRIEFING 14, THE IMPLICATIONS OF CARBON FINANCING FOR PRO-POOR COMMUNITY FORESTRY 4 (Overseas Development Institute 2007).

147. CCB, *supra* note 82, at 25, 27.

148. CCB, *supra* note 82, at 42.

149. CCB, *supra* note 82, at 32.

150. CCB, *supra* note 82, at 26.

151. Bracer et al., *supra* note 6, at 28.

152. For different legal models of how dependent communities might be defined, see LAWRENCE C. CHRISTY ET AL., FOREST LAW AND SUSTAINABLE DEVELOPMENT: ADDRESSING CONTEMPORARY CHALLENGES THROUGH LEGAL REFORM 90-93 (2007).

153. ROE ET AL., *supra* note 8, at 3; Bracer et al., *supra* note 6, at 36.

154. GRIFFITHS, *supra* note 8, at 11-13.

155. CCB, *supra* note 82, at 27.

156. KATOOMBA GROUP, *supra* note 6, at 23.

157. *Id.* at 11; Cullet & Kameri-Mbote, *supra* note 96, at 106.

158. Nelson, *supra* note 7, at 632-33.

159. CULLET, *supra* note 40, at 119; KATOOMBA GROUP, *supra* note 6, at 14, 47.

schools, clinics, job training, or other community priorities.¹⁶⁰ Compensation may also take the form of microcredit loans for business start-ups.¹⁶¹

People with land title are likely to reap the economic benefits of forest carbon investments, and people without title to their lands may receive no compensation once they are barred from forest use or displaced from their traditional lands.¹⁶² To avoid this, projects should offer clear title (including title to traditional land use) that foment project and community stability and narrows the gap between **546** the rich and the poor.¹⁶³ Nations should have a clear, transparent process for adjudicating title disputes and should ensure that it is not merely the legally sophisticated members who acquire title at the expense of poor, forest-dependent people.

A deep equity view posits that the natural and cultural world are gifts that must be stewarded wisely to meet the needs, fulfill the potential, and expand the options of future generations of humans (and nonhumans): this is the principle of inter-generational equity.¹⁶⁴ The measures that contribute to *intra*-generational equity will also ensure that future citizens will face a more equitable future. The UNFCCC recognizes this principle of international forest law.¹⁶⁵

Forest carbon offsets, however, allow Northern nations to avoid real, quantifiable emissions reductions now. Because nations and industries can use offsets and trading to elude mandatory GHG emissions reductions, Northern nations have less incentive to develop technologies that will reduce emissions from energy production and transport, and thus delay transition to a post-hydrocarbon economy for the North and enable clean, sustainable development in the South.¹⁶⁶ By allowing offsets, forest carbon sequestration postpones a transition to a more equitable future, and requires that future generations will have to sequester GHGs that are emitted now.¹⁶⁷

Furthermore, offset developers are often looking for the cheapest possible forest carbon, and thus may pluck the “low hanging fruit” in Southern nations. These projects will then be unavailable when Southern nations in the future have binding emissions reductions requirements, thus exacerbating intergenerational inequity.¹⁶⁸ Nonetheless, forest carbon projects do hold the promise that land tenure, particularly for women or those groups less likely to hold property, can be enhanced and can include succession rights for future generations.¹⁶⁹ Thus, all projects should document how future generations’ individual, community and ecosystem potential will be furthered through the projects.

4. Preventative and Polluter Pays Principles

Preventing GHG pollution before it occurs, and paying to clean up such pollution, which has occurred and will continue to occur, would abet sustainable development and thus deep equity.

547 *The Principles:* The preventative principle has developed as a “well-established principle of customary international environmental law”¹⁷⁰ since the 1937 *Trail Smelter* decision, which held that “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.”¹⁷¹ Principle 21 of the 1972 Stockholm Declaration requires “responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of

160. KATOOMBA GROUP, *supra* note 6, at 47.

161. CARMENZA ROBLEDO ET AL., CLIMATE CHANGE AND GOVERNANCE IN THE FOREST SECTOR 34 (2008).

162. Van Noordwijk et al., *supra* note 28 at 14; Bracer et al., *supra* note 6, at 31-2; ANDY WHITE & ALEJANDRA MARTIN, WHO OWNS THE WORLD’S FORESTS? FOREST TENURE AND PUBLIC FORESTS IN TRANSITION 6 (2002); COTULA & MAYERS, *supra* note 6, at 3.

163. TAKACS, *supra* note 2, at 25; Bracer et al., *supra* note 6, at 44; Van Noordwijk et al., *supra* note 28, at 10, 12; See “right to property” section below.

164. EDITH BROWN WEISS, IN FAIRNESS TO FUTURE GENERATIONS: INTERNATIONAL LAW, COMMON PATRIMONY, AND INTERGENERATIONAL EQUITY 2 (1989); Non-Legally Binding, *supra* note 53, at 104; ATAPATTU, *supra* note 95, at 78.

165. UNFCCC, *supra* note 35, art. 3; Non-legally Binding, *supra* note 54, at 104.

166. Nelson, *supra* note 7, at 644; LOHMANN, *supra* note 8, at 176.

167. HUMPHREYS, *supra* note 8, at 206.

168. CULLET, *supra* note 40, at 119; Nelson, *supra* note 7, at 646.

169. Van Noordwijk et al., *supra* note 28, at 10, 12; COTULA & MAYERS, *supra* note 6, at v.

170. ATAPATTU, *supra* note 95, at 4.

171. See *Trail Smelter Case* (U.S. v. Can.) 3 R. Int’l Arb. Awards 1905, 1950 (Trail Smelter Arb. Trib. 1938 & 1941).

areas beyond the limits of national jurisdiction.”¹⁷² The UNFCCC’s Preamble emphasizes that while States have “the sovereign right to exploit their own resources pursuant to their own environmental and developmental policies,” they nonetheless must refrain from causing “damage to the environment of other States or of areas beyond the limits of national jurisdiction.”¹⁷³ In the context of climate change, this is an equity argument for mitigation. It is also an argument that projects fomenting adaptation across boundaries should not damage the host country’s environment, for example, through substituting fast-growing exotic species for endemic species.

If Northern nations continue to emit vast quantities of GHGs, they violate the preventative principle. The polluter pays principle, captured in Principle 16 of the Rio Declaration, however, serves as a backstop to promote payment for adaptation. Principle 16 prescribes that “[n]ational authorities should endeavor to promote the internalization of environmental costs and use of economic instruments, taking into account the approach that the polluter should, in principle, bear the costs of pollution.”¹⁷⁴

How forest carbon projects could contribute or detract here: When considered alongside CBDR, entities should first strive to prevent pollution. Those who do pollute the global atmospheric commons should internalize the cost of that pollution. In some versions of the polluter pays principle, polluters must clean up and compensate those who will be most grievously affected by their pollution.

The polluter pays principle is most often applied to Northern nations, who can afford to internalize pollution’s costs because of the wealth already accrued through such pollution.¹⁷⁵ CDM offsets, in which the North continues to emit GHGs in exchange for sequestration in forests in the South, do not prevent GHG emissions; they allow the polluter *not* to pay, and thus forestall a transition to a **548** post-fossil fuel economy.¹⁷⁶ While voluntary offsets do not require a change from business as usual, they nonetheless result in less GHG pollution emitted than would otherwise be the case.

What an ideal forest carbon project would look for/include/seek to do: When polluters fund adaptation through deeply equitable forest carbon projects, particularly as part of the voluntary market, they fulfill their obligation to pay for their acts.¹⁷⁷ Offsets under the CDM (or successor) should be in addition to aggressive mandatory reductions that *prevent* GHG emissions and spur innovation in alternative energy that can be disseminated broadly to further prevent GHG pollution. Investments in forest carbon, or in any technology transfer, might be in direct proportion to the percentage of GHGs currently or historically emitted to compensate for that pollution, so that the polluter actually pays to help others adapt to the consequences of the pollution.¹⁷⁸ Viewed through a different lens, the “polluter pays” principles should be paired with a “provider gets” principle: the polluting nations should pay equitable compensation to those nations providing the environmental service of sequestering carbon.¹⁷⁹

5. Environmental Democracy

Rio’s Principle 10 promotes access to pertinent information for citizens affected by environmental decisions, the right to participate in decision-making processes, and the right to access all judicial and administrative proceedings, including redress and remedy.¹⁸⁰ These rights, which I refer to as *Environmental Democracy*, constitute emerging norms where environmental and human rights law intersect. The U.N. Non-legally Binding Instrument on All Types of Forests affirms that “local communities, forest owners and other relevant stakeholders contribute to achieving sustainable forest management and should be involved in a transparent and participatory way in forest decision-making processes that affect them, as well as in implementing sustainable forest management, in accordance with national legislation.”¹⁸¹ Environmental Impact Assessments (EIAs) with full public input and participation

172. United Nations Conference on the Human Environment, June 5-16, 1972, *Stockholm Declaration and Action Plan*, princ. 21, U.N. Doc. A/CONF.48/14/Rev.1 (June 16, 1972); See also Non-Legally Binding, *supra* note 53.

173. UNFCCC, *supra* note 33, Preamble.

174. Rio Declaration, *supra* note 127, Principle 16; Beyerlin, *supra* note 94, at 441.

175. ATAPATTU, *supra* note 95, at 442.

176. FERN, *supra* note 8; LOHMANN, *supra* note 8, at 103-04.

177. HUMAN DEVELOPMENT REPORT 2007/2008, *supra* note 32, at 41; ATAPATTU, *supra* note 95, at 438-39, 463; ANTOINETTE HILDERLING, INTERNATIONAL LAW, SUSTAINABLE DEVELOPMENT AND WATER MANAGEMENT 159 (2004); UNFCCC, *supra* note 35 at art. 4.4.

178. Cass Sunstein, *Of Montreal and Kyoto: A Tale of Two Protocols*, 31 HARV. ENVTL. L. REV. 1, 56 (2007); Mark A. Drumbl, *Poverty, Wealth, and Obligation in International Environmental Law*, 76 TUL. L. REV. 843, 909 (2002).

179. Pagiola et al., *supra* note 4, at 6.

180. Rio Declaration, *supra* note 127, Principle 10.

181. Non-Legally Binding, *supra* note 53.

and a general right to access to just governance also fall under the aegis of environmental democracy.¹⁸² The European⁵⁴⁹ Court of Human Rights has asserted that the right to access information about environmental hazards is fundamentally linked to respect for privacy and family life.¹⁸³ The UNECE Aarhus Convention is at the forefront of attempts to codify and implement these principles of environmental democracy and includes a complaint mechanism that NGOs can use to advocate on behalf of communities. Principles of environmental democracy are also finding their way into other MEAs and domestic constitutions or statutes. For example, the 2003 African Convention on the Conservation of Nature and Natural Resources also guarantees access to justice in environmental affairs.¹⁸⁴

How forest carbon projects could contribute or detract: Investments that adhere to environmental democracy principles would result in more just projects and help to develop democratic institutions at the community and national level, thus furthering institutional adaptation. The Climate Action Network has an excellent set of recommendations for public participation in CDM projects.¹⁸⁵ A pending U.S. climate bill requires that all REDD activities be conducted “with consultations with, and full participation of, local communities, indigenous peoples, and forest-dependent communities in affected areas as partners and primary stakeholders, prior to and during the design, planning, implementation, and monitoring and evaluation of activities.”¹⁸⁶

The CCB’s 2008 standards also offer promising developments for environmental democracy. All CCB projects would have to “engage broadly with all community groups and other stakeholders using socially and culturally appropriate methods.”¹⁸⁷ Affected stakeholders must be able to express concern and provide input on project design, and the project proposers must document how they incorporate this feedback.¹⁸⁸ Consultation and communication must continue throughout the life of the project.¹⁸⁹ Yet even in this progressive voluntary code, affected citizens could not necessarily scuttle a project, and certainly no standards require that local citizens actually propose, manage, and/or own the projects.

Forest carbon schemes, whether part of the CDM or voluntary markets, are often baroque and impenetrable, using complex terminology, confusing acronyms, and abstruse calculations. Communities likely to be affected by the projects may not know that such projects are proposed.¹⁹⁰ To promote environmental⁵⁵⁰ democracy, project documents for CDM or voluntary projects should be widely available in the communities likely to be impacted as well as on the internet, where NGO advocates might also review them. All public information, including meetings, should be in suitable local languages.¹⁹¹ All documents should be open for anonymous stakeholder comments, which would be publicly available. EIAs are not currently required, but should be for all forest carbon projects.¹⁹² Such EIAs should be prepared by non-partisan experts, not only prior to project implementation, but as an ongoing process designed to monitor projects as they progress.¹⁹³ Community members should review EIAs and comment before any project is implemented and should be able to abrogate unjust projects.

Host communities should be allowed to appoint honest broker ombudspersons funded by project developers to ensure that local affected populations understand the implications of any proposed project and to make sure their concerns are heeded.¹⁹⁴ Those ombudspersons should have resources to assist communities effectively. Local

182. Rio Declaration, *supra* note 127, Principle 17; ATAPATTU, *supra* note 95, at 305-06; Beyerlin, *supra* note 94, at 439-40.

183. Jonas Ebbesson, *Public Participation*, in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW, *supra* note 43, at 699.

184. *Id.* at 701.

185. CLIMATE ACTION NETWORK, PUBLIC PARTICIPATION IN THE CDM AND JI: CLIMATE ACTION NETWORK (CAN) RECOMMENDATIONS (2001).

186. H.R. 2454, *supra* note 12, at §754(d)(6)(B).

187. CCB, *supra* note 82, at 17.

188. *Id.* at 16-17.

189. *Id.* at 17.

190. TAKACS, *supra* note 25, at 67-68; Eveline Trines, *History and Context of LULUCF*, in CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES, *supra* note 3, at 39.

191. This is required in the CCB standards, *supra* note 82, at 16.

192. UNFCCC, *supra* note 35, art. 4(1)(f) asks parties to “employ appropriate methods, for example, impact assessments, formulated and determined nationally, with a view to minimizing adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change.” This language is convoluted and vague, and it does not require EIAs of individual projects.

193. ATAPATTU, *supra* note 95, at 135.

194. KATOOMBA GROUP, *supra* note 6, at 16.

people could be trained to understand forest carbon property law and to help translate complicated notions of forest carbon-as-property into legal terms local communities would understand. Such programs exist in Africa to help community members understand their legal rights and demand justice against more powerful forces. For example, in Mali, paralegals help traditional herders to understand their legal rights to access certain property resources, and also counsel village chiefs on legal rights and how to adjudicate property disputes.¹⁹⁵

Finally, to ensure environmental democracy in the entire forest carbon legal system, the communities and nations most likely to be affected by a project (e.g. indigenous people, poor rainforest nations) should be funded at all gatherings where forest carbon laws, rules, or standards are negotiated.¹⁹⁶

551 B. International Human Rights Law

1. Introduction to Human Rights

All nations have human rights duties for several reasons: because they have voluntarily acceded to IHRL treaties, because they are obliged to follow human rights that have become customary law, or because they must adhere to absolute *jus cogens* norms from which no nation may derogate.¹⁹⁷ Yet within the text of the UNFCCC, there is no reference to the corpus of IHRL that states are required to obey. Nor does IHRL appear to be mentioned in any set of voluntary standards. While the CCB standards require that projects comply with all “applicable international treaties and agreements,” they make no further mention of international human rights per se.¹⁹⁸

Private actors notoriously elude international human rights law duties.¹⁹⁹ They should not. Unlike other public international law norms, human rights ensure “inherent dignity”²⁰⁰ and thus are “fundamental for each individual human being.”²⁰¹ They are universal and should be applied in a nondiscriminatory way.²⁰² The Preambles of both the International Covenant on Civil and Political Rights (ICCPR) and International Covenant on Economic, Social, and Cultural Rights (ICESCR) declare that “the individual, having duties to other individuals and to the community to which he belongs, is under a responsibility to strive for the promotion and observance of the rights recognized in the present Covenant”²⁰³ Any entity with power to wreak damage to human rights should have a duty to respect, protect, and fulfill those rights. This includes forest carbon investors. Further blurring this legal gray area, are questions of responsibility for extraterritorial promotion or violation of human rights.²⁰⁴

In this section, I describe the rights all actors should respect, protect, and **552** fulfill. Those who nonetheless do not subscribe to the notion that private actors do, or should, bear human rights duties, may read the analysis below as a prescription for forest carbon actors who wish to exhibit ethical behavior in promoting a deeply equitable

195. Boubacar Ba, *Paralegals as Agents of Legal Empowerment: The Bankass Area of Mali*, in LEGAL EMPOWERMENT IN PRACTICE: USING LEGAL TOOLS TO SECURE LAND RIGHTS IN AFRICA 46, 55 (Lorenzo Cotula & Paul Mathieu eds., 2008); Simeon Koroma, *Paralegals and Community Oversight Boards in Sierra Leone*, in LEGAL EMPOWERMENT IN PRACTICE: USING LEGAL TOOLS TO SECURE LAND RIGHTS IN AFRICA at 77, 80; Rita H. Aciro-Lakor, *Land Rights Information Centres in Uganda*, in LEGAL EMPOWERMENT IN PRACTICE: USING LEGAL TOOLS TO SECURE LAND RIGHTS IN AFRICA at 71, 72.

196. Mace, *supra* note 34, at 5; GRIFFITHS, *supra* note 8, at 16.

197. This principle is codified for state parties in the Vienna Convention on the Law of Treaties art. 53, May 23, 1969, 1155 U.N.T.S. 331, 344.

198. CCB, *supra* note 82, at 20.

199. MUCHLINSKI, *supra* note 86, at 517; JANET DINE, COMPANIES, INTERNATIONAL TRADE AND HUMAN RIGHTS, 168-69 (2005).

200. International Covenant on Civil and Political Rights, pmbl., Dec. 19, 1966, 999 U.N.T.S. 171 [hereinafter ICCPR].

201. SIGRUN SKOGLY, BEYOND NATIONAL BORDERS: STATES' OBLIGATIONS IN INTERNATIONAL COOPERATION 208 (2006).

202. *Id.* at 3.

203. ICCPR, *supra* note 200; International Covenant on Economic, Social and Cultural Rights, pt. 1, art.1, Dec. 16, 1966, 993 U.N.T.S. 3 [hereinafter ICESCR]. This is a huge debate in international law. *See, e.g.*, DINE, *supra* note 199.

204. The High Commissioner for Human Rights, *Report of the United Nations High Commissioner on Human Rights on the Responsibilities of Transnational Corporations and Related Business Enterprises with Regard to Human Rights* para. 8(d), U.N. Doc. E/CN.4/2005/91 (Feb. 15, 2005); SKOGLY, *supra* note 201; Theodor Meron, *Extraterritoriality of Human Rights Treaties*, 89 AM. J. INT'L L. 78, 81-82 (1995); Fons Coomans, *Some Remarks on the Extraterritorial Application of the ICESCR*, in EXTRATERRITORIAL APPLICATION OF HUMAN RIGHTS TREATIES (183-84) (Fons Coomans & Menno T. Kamminga eds., 2004).

world. Furthermore, projects, done equitably have tremendous potential to advance human rights. Likewise, Human rights, if taken seriously, have tremendous potential to improve forest carbon investments, because local support lends project stability, and rights-promoting projects can potentially fetch higher prices from purchasers who desire equitably-sequestered carbon.²⁰⁵

All nations have duties to respect, protect, and fulfill human rights. When Southern nations promote forest carbon investments that force people off their land and/or remove their means of subsistence, or when Northern nations make such investments, they are failing in their duty to *respect* and are directly abridging human rights. When nations fail to legally control private actors investing in rights-impairing projects, they fail in their duty to *protect* human rights.²⁰⁶ Nations that do not proactively seek to regulate activities of their private actors are evading their duty to *fulfill* human rights. Nations, whether in the South or the North, who do not attempt to channel carbon investments towards promoting human rights are also failing in their duties to *fulfill* human rights.

I will discuss here only rights guaranteed by the ICCPR and ICESCR. The three major regional agreements all specify human rights duties for member states.²⁰⁷ In their own constitutions or laws, some nations have amplified human rights obligations and made them justiciable and applicable to private actors.²⁰⁸

All forest carbon schemes should specify the specific human rights named in 553 the appropriate international and regional human rights instruments and document how the project respects, protects, and fulfills the particular provisions of those human rights instruments. Proposals should name the specific human rights obligations encoded in the national constitution and legislation where the project developers are working and document how they are fulfilling them.

2. Civil & Political, and Economic, Social, & Cultural Rights

Effective Remedies (ICCPR 2.3(a))

Citizens whose fundamental rights are violated by forest carbon projects should have prompt appeal and fair remedies with effective legal counsel at a national or international level. Currently, the CDM prescribes no formal grievance procedures. While proposed projects have an open comment period, project documents are difficult to find and developers need not heed negative comments.²⁰⁹ The CCB standards require that each project include a grievance procedure, but neither names fundamental rights that must be monitored, nor specifies remedies should rights be violated.²¹⁰

Each country's DNA must approve a CDM project, but no formal means of appeal are specified.²¹¹ A formal grievance procedure should be established for each project so that communities who feel that their rights have been violated have a formal means of redress. That procedure should be at the community or national level,

205. CCB, *supra* note 82, at 6 (discussing the benefits of local support for a project).

206. See Robert McCorquodale & Penelope Simons, *Responsibility Beyond Borders: State Responsibility for Extraterritorial Violations by Corporations of International Human Rights Law*, 70 MOD. L. REV. 598, 598 (2007) ("analysis shows that home states of TNCs have obligations under international law in certain situations to regulate the extraterritorial activities of corporate nationals or the latter's foreign subsidiaries and can incur international responsibility where they fail to do so.").

207. African Charter on Human and Peoples' Rights, art. 1, June 27, 1981, 21 I.L.M. 58 [hereinafter African Charter]. Convention for the Protection of Human Rights and Fundamental Freedoms, Council of Europe, § 1, Nov. 4, 1950, 213 U.N.T.S. 222; American Convention on Human Rights, chs. II-III, Nov. 22, 1969, 1144 U.N.T.S. 123.

208. See generally RICHARD B. LILLICH ET AL., *INTERNATIONAL HUMAN RIGHTS: PROBLEMS OF LAW, POLICY, AND PRACTICE* 100 (4th ed. 2006) (stating that fifty-six constitutions throughout the world guarantee a right to an environment of a specified quality and that several federal courts deem the constitutional right to a healthy environment justiciable); For one example of a right to a healthy environment and clean water, see S. AFR. CONST. 1996 § 24; *Gov't of the Republic of S. Afr. & Others v. Grootboom & Others*, 2000 (11) BCLR 1169 (CC) at ¶¶ 19, 93 (S. Afr.); Jan Glazewski, *The Rule of Law: Opportunities for Environmental Justice in the New Democratic Legal Order*, in ENVIRONMENTAL JUSTICE IN SOUTH AFRICA 171, 174 (David A. McDonald ed., 2002). For a comprehensive review on justiciability of environmental human rights, see David Takacs, *The Public Trust Doctrine, Environmental Human Rights, and the Future of Private Property*, 16 N.Y.U. ENVTL. L.J. 711, 730 (2008).

209. See *supra* under "Environmental Democracy."

210. CCB, *supra* note 82, at 17.

211. Ebeling, *supra* note 80, at 54; see Bruno Locatelli, et al., *Design Issues in Clean Development Mechanism Forestry Projects*, in CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES, *supra* note 3, at 114.

perhaps as part of the DNA's office. Voluntary market project grievances could also use the same institutional apparatus. Should the DNA be at risk of conflict of interest (as we will see below in section V.C: Host States as Duty Bearers, DNAs might have other reasons for ignoring project human rights violations) each nation should appoint ombudspersons to advocate for communities.

A CDM ombudsperson's office should be established to hear grievances when national appeals fail. Clear channels of communication and clear responsibilities of grievance managers should be outlined, including a timetable for required responses. Project developers should demonstrate that an NGO or other "honest broker"²¹² is acting to assist rural people to understand the details of the project, including responsibilities and liabilities. Finally, grievances should be heard both before a project begins and during the duration of the project. This could be tied to an EIA process, which is currently not required in either CDM or voluntary offsets.

554 *Right to Life (ICCPR Art. 6.1)*

"Every human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of his life."²¹³ Equitable investments that secure land tenure fairly and contribute to livelihoods promote the right to life. Forest carbon projects that foment genuine ecological adaptation help buffer communities from environmental catastrophes.²¹⁴ Projects that do the reverse—deprive people of the ecological base that supports and provides their subsistence—impair or deny the right to life.²¹⁵

In my discussion further down in this section of the right to an adequate standard of living provided by the International Covenant on Civil and Political Rights, I discuss how CDM or voluntary market projects risk divesting people of traditional lands and livelihoods. Currently, neither project developers' home countries nor host countries have sufficient ability or incentive to respect, protect, and fulfill the right to life that projects can promote or impair. Project developers should document in detail how projects promote the right to life for all community members. They should develop monitoring plans to ensure people's lives and livelihoods are not negatively impacted. This includes not only the communities formally participating in the project, but also neighboring communities whose access to traditional resources might be restricted. DNAs or other host country authorities should have procedures to ensure that investments in fact respect, protect, and promote the right to life of all their nations' citizens.

Equal Rights for Men and Women (ICCPR Art. 3; ICESCR Art. 3)

The Convention on the Elimination of all Forms of Discrimination Against Women (CEDAW) further elaborates these rights, including the particular rights of rural women.²¹⁶ Forest carbon projects could reward women equally to men and recognize that women often do more of the farm labor and cooking fuel collection than men.²¹⁷ Providing equal access to the potential livelihood benefits and, at the very least, not barring women from traditional farming and hunting lands or wood products sources could further gender equality.²¹⁸

212. KATOOMBA GROUP, *supra* note 6, at 15-16.

213. ICCPR, *supra* note 200, at Art. 6.1.

214. E.g. Gunther, *supra* note 68; Tipper, *supra* note 7, at 224, 232: "Restoring this woodland means that my family will not have to walk so far to collect wood for cooking. We will also have a good supply of fenceposts and beams, which are getting very difficult to find these days. (Farmer in Jusnájáb, near Comitán)." "If these cedros grow as well as the ones in the next village then by the time my son is old enough to go to college, they should be worth enough to pay for his fees and upkeep. (Farmer in Muquenal, near Palanque)." See also examples from Mexico, New Zealand, Madagascar, and elsewhere in CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES, *supra* note 3.

215. See Sheila Watt-Cloutier, Chair, Inuit Circumpolar Conference, *Petition to the Inter American Commission on Human Right Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States* 6 (Dec. 7, 2005) [hereinafter *Petition*].

216. Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), art. 14, adopted by U.N. Gen. Assembly Dec. 18, 1979, 19 I.L.M. 33, available at <http://www.un.org/womenwatch/daw/cedaw/text/econvention.htm#article14>. Art 14.2(g), for example, requires that women "have access to agricultural credit and loans, marketing facilities, appropriate technology and equal treatment in land and agrarian reform as well as in land resettlement schemes."

217. MANJU DUTTA DAS, IMPROVING THE RELEVANCE AND EFFECTIVENESS OF AGRICULTURAL EXTENSION ACTIVITIES FOR WOMEN FARMERS (1995), <http://www.fao.org/docrep/v4805e/v4805e00.htm> (last visited Feb. 2, 2010); Eva Rehfuess, Sumi Mehta, & Annette Prüss-Üsrün, *Assessing Household Solid Fuel Use: Multiple Implications for the Millennium Development Goals*, 114 *Envtl. Health Persps.* 373, 373-78 (2006) (discussing fuel collection by women in the developing world).

218. KATOOMBA GROUP, *supra* note 6, at 42; Quan, *supra* note 6, at 42.

CCB's standards mention women as a "disadvantaged" group that could be targeted for "Exceptional Community Benefits."²¹⁹ While attention to women's needs and representation can increase transaction costs, it can also reduce implementation costs and promote sustainability, given that women are often the primary users of forest land.²²⁰

Women's equal participation and benefit is not required in either CDM or voluntary projects. Given that women traditionally do not hold equal power in rural areas of Southern nations (or Northern ones, for that matter), this can pose problems. To promote gender equality, projects should require that women receive at least 50% of stakeholder participation in design and management, 50% of ownership, 50% of governance, and 50% of financial benefits. For example, in the proposed Amazonas, Brazil Juma Reserve REDD Project, monthly payments would be made to female heads of household.²²¹ Enforcement plans should include monitoring for equal participation. Ombudspersons at community, national, or CDM international levels could specifically consider women's grievances should they be unequal or disadvantaged project participants.

*Right to Work (ICESCR Art. 6) and Right to Just and Favourable Conditions of Work (ICESCR Art. 7)*²²²

Reforestation may be a boon to local economies, particularly if managers pay fair wages, obey international safety standards, and help local people acquire sophisticated job skills.²²³ Reforestation usually employs more people more profitably than avoided deforestation.²²⁴ Avoided deforestation projects could **556** nonetheless be structured to sustain work opportunities including timber and food gathering and ecotourism.

For example, in a Chiapas project, farmers developed marketable skills in silviculture, financial planning, and surveying.²²⁵ REDD projects can sustain forest resources that people depend upon for work, although it can also put people out of work if timber harvesting or other work is prohibited.²²⁶ However, such employment is not necessarily optimal employment. For example at a proposed CDM project in Tanzania a "developer promised steady employment to replace traditional grazing land, however in reality they were hiring local people to plant only between December and March, and was paid less than US\$1 per day."²²⁷ Lohmann documents a high profile Ecuadorian scheme in which outsiders procured the well-paying jobs, and local people were forced to give free labor to pay off debt.²²⁸ In Uganda and elsewhere, farmers provided free labor because they unwittingly were responsible for upkeep of the project, having signed contracts whose implications they did not fully understand.²²⁹

CCB's 2005 standards created optional labor standards that require project developers to: use "local stakeholders will fill all employment positions (including management) if job requirements are met;" explain how stakeholders will be selected for positions and where relevant, must indicate how traditionally underrepresented stakeholders and women will be given a fair chance to fill positions for which they can be trained;"²³⁰ "[s]how that the project will inform workers about their rights;" show that "the project complies with international rules on worker rights;"²³¹ must "[c]omprehensively assess situations and occupations that pose a substantial risk to worker safety;" put in place a plan "to inform workers of risks and to explain how to minimize such risks;" and show "how the risks will be minimized using best work practice" when worker safety cannot be guaranteed.²³² The fact that these criteria

219. CCB, *supra* note 82, at 34.

220. Van Noordwijk et al., *supra* note 28, at 46.

221. FUNDAÇÃO AMAZONAS SUSTENTAVEL, THE JUMA SUSTAINABLE DEVELOPMENT RESERVE PROJECT: REDUCING GREENHOUSE GAS EMISSIONS FROM DEFORESTATION IN THE STATE OF AMAZONAS, BRAZIL, PROJECT DESIGN DOCUMENT 103 (2008), http://www.climate-standards.org/projects/files/juma/PDD_Juma_Reserve_RED_Project_v5_0.pdf (submitted to the Climate, Community & Biodiversity Alliance).

222. These rights include: "fair wages and equal remuneration for work of equal value without distinction of any kind, in particular women being guaranteed conditions of work not inferior to those enjoyed by men;" "Safe and healthy working conditions;" and "[e]qual opportunity for everyone to be promoted in his employment to an appropriate higher level." ICESCR, *supra* note 203, at §§(7(a)(i)) (7(b)) (7(c)).

223. Van Noordwijk et al., *supra* note 28, at 14-15.

224. Van Noordwijk et al., *supra* note 28, at 17.

225. Tipper, *supra* note 5, at 232.

226. KATOOMBA GROUP, *supra* note 6, at 11.

227. LOHMANN, *supra* note 8, at 242.

228. *Id.* at 232-33.

229. *Id.* at 240.

230. CCB, CLIMATE, COMMUNITY, AND BIODIVERSITY PROJECT DESIGN STANDARDS 25 (1st ed. 2005) available at www.climate-standards.org/pdf/ccb_standards_oct05.pdf.

231. *Id.*

232. *Id.* at 25.

are *optional*, means that normal CCB certification has been proceeding without guarantees of local employment or worker safety. However, the 2008 standards are worded so as to provide more protection of workers' rights, and give local citizens equal opportunity for jobs and capacity building.²³³

Employment contracts should comply with all ILO treaty standards. Workers should be informed of all national and international labor standards and should **557** understand and freely assent to their risks and rights. Employers would institute grievance procedures, with impartial ombudspersons available to advocate and adjudicate disputes. Payment for labor would compensate for opportunity costs lost from activities that are now precluded.²³⁴ Local people would be hired for all positions they are capable of filling, and where they lack the skills to fill these positions, training and apprenticeship programs should be established and maintained for the duration of the project.

Adequate Standard of Living including adequate food, clothing, and housing, and continuous improvement of living conditions (ICESCR Art. 11)

As noted under the sections on Rights to Life, Work, and Property, investments that foment ecological adaptation, promote or preserve work options, and provide clear land title can promote improved living conditions and allow people to grow or buy food. Pro-poor investments alleviate poverty and promote this right. Pagiola et al. cite multiple examples of payment for environmental services to show where "market mechanisms are associated with investments in local institutions, education, and health, additional positive spin-offs may be expected."²³⁵ The Katoomba Group points out that "[r]egular payments [for ecosystem services] could provid[e] both a reliable source of supplemental income and additional employment in the community. Even a modest payment, reliably delivered over many years, may provide a meaningful increase in net income as well as a mechanism for adopting more sustainable land management."²³⁶ In other words, ecological adaptation accompanied by social and institutional adaptation work together to alleviate poverty. Van Noordwijk et al. distinguish between "weakly pro-poor" projects that transfer income from wealthy Northern communities to poor Southern communities and "strongly pro-poor" projects that improve local equity by focusing on the poorest of the poor within Southern communities.²³⁷

But forest carbon investments may be designed to offset emissions in the most inexpensive way possible and to provide profit or ancillary benefits to the investors; pro-poor strategies may raise the cost of doing business.²³⁸ Worse, forest carbon schemes that disconnect people from their traditional land can lead to forced relocations or starvation. ENCOFOR, a set of EU guidelines for project developers, overtly contemplates that projects can acceptably lead to relocation and the need to import food from other regions.²³⁹ Griffiths notes that "there is **558** little concrete evidence" about how precisely a given project will counter poverty.²⁴⁰ While the CCB's standards require "Net Positive Community Impacts" that must be "positive for all community groups," only optional "Gold Level" projects are required to be "explicitly pro-poor."²⁴¹

Elsewhere I document examples that raise red flags about investments that do not directly address, or remain unconcerned, with poverty alleviation.²⁴² For example, the World Bank is investing heavily in forest carbon, buying carbon credits and buffering Northern investors from risk. About 7% of the Bank's US\$2 billion carbon portfolio lies in the Community Development Carbon Fund (CDCF).²⁴³ According to the Fund's website, the "single overarching factor, which defines this Fund and differentiates it from other World Bank carbon funds, is the generation of community benefits for the projects it finances."²⁴⁴ That is to say, this Fund "differentiates"

233. CCB, *supra* note 82, at 18.

234. Van Noordwijk et al., *supra* note 28, at 26, 37, 45.

235. Pagiola et al., *supra* note 74, at 283.

236. KATOOMBA GROUP, *supra* note 6, at 10.

237. Van Noordwijk et al., *supra* note 28, at 44.

238. Luttrell et al., *supra* note 146, at 2.

239. CARMENZA ROBLEDO & NICOLE STEJSKAL, ENVIRONMENT AND COMMUNITY BASED FRAMEWORK FOR DESIGNING AFFORESTATION/REFORESTATION PROJECTS IN THE CDM: METHODOLOGY DEVELOPMENT AND CASE STUDIES: MANUAL FOR ADDRESSING SOCIAL AND INSTITUTIONAL ISSUES 11 (2007), available at http://www.joanneum.at/encofor/tools/tool_demonstration/download_tools.htm (under Social Impact Assessment Tool).

240. GRIFFITHS, *supra* note 8, at 8.

241. CCB, *supra* note 82, at 11, 34.

242. TAKACS, *supra* note 2.

243. The World Bank, Community Development Carbon Fund, <http://go.worldbank.org/QLNHGWLPS0> (last visited Feb. 2, 2010) (for more information concerning the CDCF).

244. *Id.*

from the other nine World Bank Carbon Funds because it actually focuses on benefiting local communities where it is investing. CDCF projects are an “opportunity for small communities in poorer countries to obtain clean water, improve health conditions, create jobs for women, as much as it is an investment in clean technologies that help reduce greenhouse gas emissions and mitigate climate change.”²⁴⁵ Carbon projects in the Bank’s portfolio that do not fall under the CDCF’s aegis need not focus on these factors, and thus billions of dollars of Bank funded forest carbon projects may do nothing to alleviate poverty and may in fact exacerbate poverty.²⁴⁶

Plans should show how community members’ economic status will improve. If there are winners and losers, the plan would show how the losers will be compensated. Pro-poor goals should be incorporated into all projects from the beginning, rather than grafting them on as a side goal or afterthought.²⁴⁷ Plans should explain how financial or other benefits will be distributed within a community and emphasize how the poorest of the poor will disproportionately benefit. Project developers should demonstrate how communities not directly benefiting from a project but potentially impacted by project restrictions will be compensated. They should explain how people will continue to have sustainable access to the forest resources they need, such as food, medicine, and building **559** material, or how cash from employment or carbon credits will compensate for lost access.²⁴⁸ Developers should document ancillary project benefits, including new schools, clinics, and microcredit for entrepreneurs whose livelihoods may be impacted by the scheme.

All forest carbon projects should include a monitoring plan to assess ongoing community impacts. The CCB 2008 standards require this, but because “a full community monitoring plan can be costly” the details need not be worked out at the design stage.²⁴⁹ For full transparency and maximum security, the plan should be worked out before a community accepts a project. Developers should include an insurance policy should drawbacks exceed benefits and impact livelihoods.²⁵⁰ The CCB 2008 standards include “optional” “exceptional community benefits” that are “pro-poor.”²⁵¹ These are excellent additional criteria and should be mandatory for all offsets, whether voluntary or CDM.

Right to Culture (ICCPR Art. 27, ICESCR Art. 15.1(a))

Many indigenous peoples’ or local communities’ cultures are fundamentally tied to the ecological world around them.²⁵² Investments that undercut the ecological matrix in which people live simultaneously erode their culture. Conversely, investments that revitalize ecosystems may revitalize cultures.

The CCB standards require identifying “[a]reas that are critical for the traditional cultural identity of local communities, such as areas of cultural, ecological, economic or religious significance identified in collaboration with the local communities.”²⁵³ These areas must be maintained or enhanced.²⁵⁴ Furthermore, commodifying an ecosystem service may be incompatible with a local culture.²⁵⁵ Worse still, this cultural lack of translation may lead the local community to misunderstand what the project is or proposes to do. Investments that erode local livelihoods also erode community culture.

Project developers should use a participatory approach that identifies cultural assets tied to the project area and ensure that cultural values are protected or promoted through the project.

560 *Right to Property (Universal Declaration of Human Rights, Art. 17)*²⁵⁶

245. *Id.*

246. See HUMPHREYS, *supra* note 8, at 168-89 (stating the World Bank’s professed forest principles); see also The Equator Principles, <http://www.equator-principles.com> (last visited Feb. 13, 2010) (stating the obligations the World Bank has committed to fulfilling).

247. See LUTRELL ET AL., *supra* note 146, at 2.

248. See KATOOMBA GROUP, *supra* note 6, at 11.

249. CCB, *supra* note 82, at 27.

250. KATOOMBA GROUP, *supra* note 6, at 12.

251. CCB, *supra* note 82, at 34.

252. See, e.g., *Petition*, *supra* note 215, at 5 (stating effect of climate change on Inuit culture due to the culture’s close tie to the condition of their physical surroundings).

253. CCB, *supra* note 82, at 13.

254. CCB, *supra* note 82, at 12-13, 25.

255. KATOOMBA GROUP, *supra* note 6, at 14.

256. Article 17 of the Universal Declaration of Human Rights provides that: “1) Everyone has the right to own property alone as well as in association with others; 2) No one shall be arbitrarily deprived of his property.” Universal Declaration of Human Rights, G.A. Res. 217A, Art. 17, U.N. GAOR, 3d Sess., 1st. plen. mtg., U.N. Doc. A/810 (Dec. 12, 1948). This right was not elaborated in either the ICCPR or the ICESCR, but is secured in the major regional human rights conventions. See *Petition*, *supra* note 215, at 5.

Janet Dine argues that “property” is not merely “rights over things, but rights over people.”²⁵⁷ When private actors privatize previously public resources, “where the relevant item is food or water, the freedom and liberty inherent in exercise of property rights becomes the death warrant of those whose access to the item is thereby restricted.”²⁵⁸ Forest carbon projects now occupy thousands, and soon perhaps millions, of acres of land with potentially competing uses. Such projects could further the right to property for individuals or communities by securing land tenure and clear title to property as a precondition of a project. Clear property title is seen as a *sine qua non* for investment stability,²⁵⁹ and when this title devolves to those who have traditionally used the land without formal title, their rights to property and the benefits contained therein are enhanced.²⁶⁰ Examples from Indonesia, Madagascar, and Mexico suggest that secure land title increases land’s value, reduces corruption, and increases landowners’ incomes.²⁶¹ Various sources show that small-scale projects can generate community benefits, allowing profits to be generated sustainably from individually or communally owned property.²⁶²

However, carbon comprises a number of new, confusing, and potentially conflicting property forms. Different entities may own above ground carbon sinks, below-ground carbon sinks, the right to manage for maximum carbon sequestration potential, the carbon itself, and the credits resulting from carbon emissions reductions.²⁶³ This legal complexity is seldom clarified in national legislation and is difficult for local, forest dependent communities to understand.⁵⁶¹²⁶⁴

CCB’s 2008 standards protect property rights. The interests of capital investors dovetail with the interests of local people, because projects with clear land title avoid legal problems; projects that evict people face resistance and thus instability and extra expense.²⁶⁵ CCB projects require that the “project will not encroach uninvited on private property, community property, or government property and has obtained the free and prior consent of those whose rights will be affected by the project.”²⁶⁶ CCB projects cannot “require the involuntary relocation of people or of their activities important for the livelihoods and culture of the communities,” and if relocation does happen it is with “free, prior, informed consent of those concerned with provisions in the agreement for just and fair compensation.”²⁶⁷ Of course, the project proponents (usually Northern investors) are also entitled to “clear, uncontested title to the carbon rights,” or the investors must “provide legal documentation demonstrating that the project is undertaken on behalf of the carbon owners with their full consent.”²⁶⁸

On the other hand, speculators can cut deals that dispossess people of land for which they have no formal title.²⁶⁹ Because developers wish to reduce transaction costs, it is easier to compensate “only the most visible and vocal stakeholders, ignoring local communities with informal use rights and less ability to articulate demands” and less likely to hold formal title in the first place.²⁷⁰ Villages may simply think they are being given a form of charity when forest carbon offsets are discussed; they may not understand the complexities of this uniquely Northern property scheme.²⁷¹

257. DINE, *supra* note 199, at 279.

258. *Id.*

259. Bracer et al., *supra* note 6 at 43; Monique Miller et al., *Legal Issues and Contractual Solutions for LULUCF Projects Under the Clean Development Mechanism*, in CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES, *supra* note 3, at 169. One of the FSC’s ten Principles of ethical forestry is that “[t]he ownership of the forest must be clearly defined and documented;” another states that “[t]he legal and customary rights of indigenous peoples ... shall be recognized and protected.” HUMPHREYS, *supra* note 8, at 120; COTULA & MAYERS, *supra* note 6, at 3.

260. Swallow et al., *supra* note 140, at 17; Van Noordwijk et al., *supra* note 28, at 10-11; Bracer et al., *supra* note 6, at 44; Rosimeiry Portela et al., *The Idea of Market-Based Mechanisms for Forest Conservation and Climate Change*, in CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES, *supra* note 3, at 25; COTULA & MAYERS, *supra* note 6, at 3.

261. Tipper, *supra* note 6, at 224—32; GRIFFITHS, *supra* note 8, at 12-13.

262. ROE ET AL., *supra* note 8, at 3—4; Tipper, *supra* note 5, at 224—5; multiple case studies in Streck et al, *supra* note 3.

263. TAKACS, *supra* note 2, at 59.

264. *See id.*

265. LOHMANN, *supra* note 8, at 265; Miller et al., *supra* note 257, at 164-65.

266. CCB, *supra* note 82, at 20.

267. *Id.*

268. *Id.* at 21.

269. ROE ET AL., *supra* note 8, at 3; Swallow et al., *supra* note 140, at 27; LUTRELL ET AL. *supra* note 148, at 3.

270. J. Smith et al., *Harnessing Carbon Markets for Tropical Forest Conservation: Towards a More Realistic Assessment*, in THE EARTHSCAN READER IN FORESTRY AND DEVELOPMENT 323, 334 (Jeffrey Sayer, ed., 2005).

271. *See* Swallow et al., *supra* note 140, at 16-17; UNITED NATIONS ENVIRONMENT PROGRAMME, LEGAL ISSUES GUIDEBOOK TO THE CLEAN DEVELOPMENT MECHANISM 66, 92 (2004).

Where projects oust people from traditional property, Griffiths argues these relocations are “undermining participating countries’ legal obligations to protect customary use of biological resources and traditional knowledge under the CBD and various human rights conventions, including the Convention on the Elimination of All Forms of Racial Discrimination (CERD).”²⁷² A guidebook for EU participants in forest carbon offsets suggests relocation as one mitigating strategy for offsets that displace people.²⁷³ Scholars and activists have discussed the plight of “environmental refugees” from global climate change due to rising sea **562** levels or drought,²⁷⁴ and forest carbon investments may directly cause environmental refugees by dispossessing them of their land.²⁷⁵

All stakeholders should help secure clear property rights for individuals or communities as an ancillary benefit that lead to greater community stability, investment in sustainable land use, and security for investors.²⁷⁶ Project developers should secure the free, prior, and informed consent of those whose property rights will be impacted.²⁷⁷ Developers should document who holds which property rights with evidence that impacted community members understand.²⁷⁸ They should document how land was used before the project and show that no one has been dispossessed of their property. To the extent that dispossession of property has occurred, mitigation should far exceed the loss. Developers should consider “time bound sequestration agreements”²⁷⁹ to make property into usufruct and not permanent rights, thus reverting control of the land to local people if the project proves unprofitable or unjust.

Developers should adopt a legal pluralism approach and investigate and recognize traditional land claims outside of formal Westernized legal channels, and show how property has been explained in culturally appropriate ways. Indigenous communities’ claims to land or carbon credits must be respected and promoted.²⁸⁰ Government or pro-poor NGOs should supervise and enforce contracts and property deeds.²⁸¹

3. Environmental Human Rights

The right to a healthy environment is an emerging norm at the intersection of IHRL and IEL.²⁸² Projects that revitalize degraded ecosystems or protect intact ecosystems necessary for healthy human communities will further environmental human rights. Projects that are potentially hazardous to the natural environment, for example through the planting of non-native species, or projects that preclude people from accessing vital ecosystem services and products, may undercut the **563** right to a healthy environment.

Earthjustice documents the “repeated and increasing recognition of a human rights-based approach to environmental protection.”²⁸³ While some experts debate whether this has become a customary principle of international law,²⁸⁴ the constitutions of over 100 nations stress protection of environmental resources, and over 100 specify the right to a healthy environment or oblige the nation and its citizens to prevent environmental harm.²⁸⁵ At least 16 nations name an explicit right to information about the health of the environment and/or about activities that may

272. GRIFFITHS, *supra* note 8, at 12.

273. See ROBLEDO & STEJSKAL, *supra* note 239, at 7, 10.

274. Aminzadeh, *supra* note 76, at 256-58; see generally Mark Dowie, *Conservation Refugees: When Protecting Nature Means Kicking People Out*, ORION, (Nov./Dec. 2005), available at <http://www.orionmagazine.org/index.php/articles/article/161/> (discussing how conservation organizations are pushing indigenous communities out of their traditional lands in the name of conservation).

275. LOHMANN, *supra* note 8, at 239-40; See, e.g., HARALD ERAKER, CO2LONIALISM: NORWEGIAN TREE PLANTATIONS, CARBON CREDITS AND LAND CONFLICTS IN UGANDA 14-15 (2000).

276. Quan *supra* note 6, at 29; Takacs *supra* note 2, at 60.

277. CCB, *supra* note 82, at 20.

278. *Id.* at 13.

279. ROE ET AL., *supra* note 8, at 3.

280. See Miller et al., *supra* note 259, at 170-71.

281. Bracer et al, *supra* note 6, at 44.

282. See Takacs, *supra* note 208, at 725-27; see also EARTHJUSTICE, ENVIRONMENTAL RIGHTS REPORT: HUMAN RIGHTS AND THE ENVIRONMENT, MATERIALS FOR THE 61ST SESSION OF THE UNITED NATIONS COMMISSION ON HUMAN RIGHTS 1 (2005), available at http://www.earthjustice.org/library/references/2005_ENVIRONMENTAL_RIGHTS_REPORTrev.pdf.

283. EARTHJUSTICE, *supra* note 282, at 1.

284. ATAPATTU, *supra* note 95, at 23.

285. EARTHJUSTICE, *supra* note 282, at 37.

impair that health.²⁸⁶ Both the American Convention on Human Rights and the African Charter on Human and Peoples' Rights guarantee the right to a healthy environment.²⁸⁷

The Right to Water comprises a subset of the Right to a Healthy Environment. In 2007, the U.N. High Commissioner for Human Rights declared that access to a sufficient amount of safe water is now a fundamental human right.²⁸⁸ While each country must determine what amount constitutes "sufficient,"²⁸⁹ the High Commissioner emphasized that each state should ensure that water is of good quality, affordable, conveniently available, prioritized for personal and domestic use, and distributed with no forms of discrimination.²⁹⁰ The Right to Water is explicit in multiple international treaties, including the Convention on the Rights of the Child (CRC) and the CEDAW.²⁹¹ It is implicit in a range of other treaties whose provisions guarantee a right to life, health, food, and an adequate standard of living.²⁹²

Projects that avoid further deforestation can contribute to the right to a healthy environment and the right to water through the protection of forests that filter **564** drinking water and protect aboveground and subterranean water sources. Projects that reforest degraded ecosystems may similarly contribute to this right by revitalizing local ecosystem services. However, reforestation projects may allow non-endemic monocrops, or GMO species. This may interfere with locally adapted ecosystem services, prevent wildlife migration, leach soil nutrients, and pirate water from other ecosystem elements.²⁹³ The CCB standards, however, now proscribe GMO species.²⁹⁴ The CDM allows GMO tree and plant species, which potentially could further undercut the right to a clean and healthy environment.²⁹⁵

Forest carbon schemes that preclude traditional, sustainable forms of forest harvesting and instead preserve forests for Northern profits, or solely for biodiversity, may directly prevent local people from enjoying the right to a clean and healthy environment; in fact, exercising exclusionary private property rights can be "a death warrant of those whose access [to food and water] is thereby restricted."²⁹⁶

Project proposals should name the environmental human rights guaranteed in the national constitutions of home and host states and explain how the proposed project helps to respect, protect, and fulfill those rights. Specifically, projects should document how the project will respect, protect, and fulfill local people's right to clean water. They should explain how the project will preserve or improve vital ecosystem resources for local communities, including native trees, renewable food sources, and pollinator species diversity. Projects should proscribe use of non-native species and GMO species, and should explain how the project will preserve and improve biodiversity resources, and how people's access to ecosystem goods and services will improve, or at least not be precluded, due to the project.

286. *Id.* at 38.

287. African Charter, *supra* note 210, at art. 24; Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights, art. 11(1), Nov. 17, 1988, O.A.S.T.S. No. 69.

288. The High Commissioner for Human Rights, *Annual Report of the United Nations High Commissioner for Human Rights on the Scope and Content of the Relevant Human Rights Obligations Related to Equitable Access to Safe Drinking Water and Sanitation Under International Human Rights Instruments*, para. 66, U.N. Doc. A/HRC/6/3 (Aug. 16, 2007) [hereinafter Water Report].

289. *Id.* at 47. Figures for minimum acceptable amount range from South Africa's guaranteed 25 litres/person/day to the WHO'S recommendation of 100 litres/person/day. Alix Gowlland-Gualtieri, *South Africa's Water Law and Policy Framework: Implications for the Right to Water 7* (IELRC, Working Paper 2007-03), available at <http://www.ielrc.org/content/w0703.pdf>; GUY HOWARD & JAMIE BARTRAM, DOMESTIC WATER QUANTITY, SERVICE LEVEL AND HEALTH 22 (2003).

290. Water Report, *supra* note 288, para. 47.

291. Convention on the Rights of the Child, art. 24(c), Nov. 20, 1989, 1577 U.N.T.S. 3; CEDAW, *supra* note 216, Art. 14.

292. Water Report, *supra* note 288, para. 5(b); David Takacs, *Water Sector Reforms and Principles of International Environmental Law*, in WATER LAW FOR THE TWENTY-FIRST CENTURY 275-77 (Philippe Cullet et al. eds., 2010); See also Alix-Gowlland Gualtieri, *International Human Rights Aspects of Water Law Reforms*, in WATER LAW FOR THE TWENTY-FIRST CENTURY 238-41 *supra*.

293. CCB, *supra* note 82, at 28; See LOHMANN, *supra* note 8, at 227-30, 238-40, 267-306 (for an example of ecological drawbacks of using non-native pine and eucalyptus in a forest carbon project in Ecuador), 238, 240, 267, 306.

294. CCB, *supra* note 82, at 28.

295. Jason Schwartz, "Whose Woods These Are I Think I Know:" *How Kyoto May Change Who Controls Biodiversity*, 24 N.Y.U. ENVTL. L.J. 421, 423 (2006); see AFFORESTATION IN GRASSLAND AREAS OF UCHINDILE, KILOMBERO, TANZANIA & MAPANDA, MUFINDI, TANZANIA, PROJECT DESIGN DOCUMENT 3-5, 15 (2007).

296. DINE, *supra* note 199, at 279.

4. Indigenous Peoples' Rights

Climate change disproportionately affects forest-dependent, indigenous peoples,²⁹⁷ and thus forest carbon projects should be designed to help these 565 peoples adapt. The right of indigenous and tribal peoples to control their own resources is a principle both of treaty law and of customary international law.²⁹⁸ The right of all “peoples” to “self determination,” i.e. the right to “freely determine their political status and freely pursue their economic, social, and cultural development,” is the first right enshrined in both the ICCPR and ICESCR.²⁹⁹

A U.N. Special Rapporteur noted that “removal from or destruction or degradation of traditional lands inevitably leads to serious loss of life and health and damage to the cultural integrity of indigenous peoples.”³⁰⁰ Self-determination demands that indigenous people access and control their resource base; deep equity requires that indigenous groups have clear title to their lands, or see their traditional land rights honored.³⁰¹

Where they are full participants or initiators of carbon projects, where they receive financial benefits from these schemes, and where they help them secure title, indigenous peoples' human rights may be advanced.³⁰² The CBD, CERD, ILO Convention No. 169, Agenda 21, and the Non-legally Binding Instrument on All Types of Forests require signatory nations to protect traditional use of biological resources and traditional knowledge of those resources.³⁰³ Establishing clear indigenous land rights can be “daunting.”³⁰⁴ White & Martin cite the favorable example of Bolivia, where, through “strong political will,” 1.4 million hectares of forest with clear ownership rights have been established for indigenous communities.³⁰⁵

While business groups like the International Timber Trade Organization (ITTO) proclaim support for indigenous groups' rights,³⁰⁶ governments and 566 business interests have strong incentives to capture traditional indigenous land and traditional forest related knowledge³⁰⁷ that may yield riches in the form of REDD credits.³⁰⁸ Thus forest carbon projects on indigenous lands may be inequitable, with examples of forced relocations, “guns and guards” protection of formerly common access resources, and violations of environmental democracy.³⁰⁹

Indigenous people do not speak with a monolithic voice. Griffiths points out that some indigenous groups support forest carbon investments, as they see financial and land tenure benefits accruing from properly negotiated agreements.³¹⁰ But even where offsets improve an indigenous community's land tenure and livelihood, CERs are still often sold to energy companies or other industrial polluters to continue polluting indigenous groups elsewhere, and thus some groups oppose them.³¹¹

297. Note that “indigenous” peoples are not a monolithic group, and various authors have named typologies that distinguish between them (and their rights) and other groups such as “traditional peoples, settlers on the agricultural frontiers, long-standing farmers or pastoralists traditional peoples, settlers on the agricultural frontiers, long-standing farmers or pastoralists facing management of declining resources, and agro-pastoral and forest dwellers who have been successful in restoring their resource base.” Bracer, et. al., *supra* note 6, at 24; *see also* ROBLEDO ET AL., *supra* note 161, at 31.

298. ILO Convention 169, *supra* note 54; United Nations Declaration on the Rights of Indigenous Peoples, G.A. Res. 61/295, U.N. Doc. A/RES/61/295 (Sept. 13, 2007); Russell Lawrence Barsh, *Indigenous Peoples, in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW*, *supra* note 43, at 845.

299. ICCPR, *supra* note 200, at art. 1.1; ICESCR, *supra* note 203, at art 1.1; HUMPHREYS, *supra* note 8, at 106.

300. U.N. Econ & Soc. Council [ECOSOC], Sub-Comm'n on Prevention of Discrimination & Prot. of Minorities, *Final Report on Human Rights and the Environment*, para. 77, U.N. Doc E/CN.4/Sub.2/1994/9 (July 6, 1994) (*prepared by Fatima Zohra Ksentini*).

301. WHITE & MARTIN, *supra* note 162, at 6, 21.

302. WHITE & MARTIN, *supra* note 162, at 18.

303. Cited in GRIFFITHS, *supra* note 8, at 12; CBD, *supra* note 54, at art 8(j), 10(c); Non-Legally Binding, *supra* note 53, at princ. 6(f), 6(y); Rio Declaration, *supra* note 127, at 15.5(e); ILO Convention 169, *supra* note 54, at arts. 7(1), 15(1), 16(1), 7(1), and 17(2).

304. WHITE & MARTIN, *supra* note 162, at 19; *see also* Chris Tollefson, *Indigenous Rights and Forest Certification in British Columbia*, in HARD CHOICES, SOFT LAW: VOLUNTARY STANDARDS IN GLOBAL TRADE, ENVIRONMENT, AND SOCIAL GOVERNANCE 101 (John J. Kirton & Michael J. Trebilcock eds., 2004) (discussing the challenges of establishing aboriginal rights in British Columbia).

305. WHITE & MARTIN, *supra* note 162, at 21.

306. United Nations Conference for the Negotiation of a Successor Agreement to the International Tropical Timber Agreement, 1994, Jan. 16-27, 2006, *International Tropical Timber Agreement*, U.N. Doc. TD/TIMBER.3/12 (Feb. 1, 2006).

307. HUMPHREYS, *supra* note 8, at 74.

308. GRIFFITHS, *supra* note 8, at 12; KATOOMBA GROUP, *supra* note 6, at 29.

309. GRIFFITHS, *supra* note 8, at 12, 15; LOHMANN, *supra* note 8, at 237; Quan, *supra* note 6, at 36.

310. GRIFFITHS, *supra* note 8, at 10.

311. GRIFFITHS, *supra* note 8, at 11.

Ideally, projects should be proposed by and managed by indigenous communities, with those communities setting all the terms and reaping all the benefits. Free Prior Informed Consent should be the cornerstone of all projects involving indigenous groups. This means that once given timely, full information, groups must give express consent.³¹² Project proposers should honor traditional indigenous notions of property and allow the group to define how those notions will be respected.³¹³ If the community wishes, an NGO should act as an honest broker to help negotiate and translate between the indigenous group and the developer.³¹⁴ Impact assessments should be specialized to assess particular indigenous culture, lands, and knowledge.³¹⁵

If indigenous people will assume management responsibilities as a part of the project, these responsibilities must be clearly delineated in a culturally respectful and appropriate way. In no case should a community be left poorer than before the project. No group should be barred or restricted access to traditional lands that form the basis of their subsistence and culture. Representatives of participating indigenous groups should be trained and encouraged to participate in future international discussions on forest carbon. Developers should prioritize projects in nations that have ratified ILO Convention 169, which codifies indigenous peoples' resource use rights.

567 IV. FOREST CARBON AND INTERNATIONAL LAW

For those seeking a world of deep equity, forest carbon projects reveal international law's shortcomings. IHRL disappears in both the formal global climate change treaty regime and the voluntary market. Principles of IEL where environment meets social justice are bandied about, but may not be respected in actual deals. They are not often enforced or enforceable in national courts or international legal fora and normally do not apply to non-state actors. Some voluntary standards, such as the CCB's, afford better protections than formal treaties and associated rulemaking; but if project developers fail to heed those standards, what court will pursue them? IEL lacks complaint procedures and enforcement mechanisms. While IHRL does have an enforcement apparatus, human rights actors have yet to formally pursue inequitable forest carbon projects.³¹⁶ Forest carbon schemes pose significant problems for international law, but also serve as a laboratory for gravely needed reforms. International law, reformed to regulate these investments, would better promote deep equity for all situations where human, community, and ecological health and potential are imperiled.

A. Private Actors as Duty Bearers

Private actors and organizations elude formal international legal duties, which are largely limited to states. As private entrepreneurs invest in distant forests, both home and host states may fail to scrutinize their actions. Those investing in forests as carbon repositories for Northern industrial excess—and sometimes profiting handsomely thereby—may elude responsibility for illegal or immoral side effects of their investments. It is not merely that some projects fall short of genuine adaptation. Human lives, human communities, and even ecological integrity may fall by the wayside without a more functional, aggressive system of international law.

As a general rule, in IHRL and IEL, *nations* bear duties. Ratner describes the “doctrinal straitjacket” that emphasizes *state* responsibility and duties in IEL and criticizes the anachronistic emphasis on state responsibility when powerful, multifaceted non-state actors act across national borders.³¹⁷ “Nations” seldom pollute; private actors do. Muchlinski notes, “[a]t present there are no detailed international rules, or procedures, for the environmental regulation of MNEs.”³¹⁸ While private actors may be liable in domestic courts for environmental infractions, corporate social actors are unlikely to be found liable for violations of principles of customary IEL, and legal arguments and

312. ATAPATTU, *supra* note 95, at 75; HUMPHREYS, *supra* note 8, at 201.

313. WHITE & MARTIN, *supra* note 162, at 21; GRIFFITHS, *supra* note 8, at 10.

314. KATOOMBA GROUP, *supra* note 6, at 15-16.

315. See, e.g., SECRETARIAT OF THE CONVENTION ON BIOLOGICAL DIVERSITY, AKWE: KON GUIDELINES 1 (2004), available at http://www.wipo.int/export/sites/www/tk/en/folklore/creative_heritage/docs/akwekon.pdf.

316. ATAPATTU, *supra* note 95, at 8.

317. Steven R. Ratner, *Business*, in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW, *supra* note 43, at 807, 808, 811, 816, 827.

318. MUCHLINSKI, *supra* note 86, at 566.

institutions that would hold 568 individuals or corporations responsible for human rights obligations are similarly underdeveloped.³¹⁹ IFIs eschew being bound by human rights duties or having human rights conditionalities imposed on their loans.³²⁰

While IEL usually focuses on the obligations of nation-actors, many scholars and activists argue that these same norms do, or should also apply to non-state actors, including MNEs, IFIs, NGOs, and individuals. The U.N. has drawn up a set of norms that would bind corporations to human rights responsibilities.³²¹ The UN High Commissioner on Human Rights has recommended that corporations be responsible for human rights violations within their “sphere of influence.”³²² Such exhortations, however, are the softest of soft law. Usually it is up to home or host states to regulate them within domestic frameworks.³²³

To transition to a sustainable, deeply equitable world, all actors should be bound by the same principles of IHRL and IEL to which nation states are bound. The foundation of all human rights is to protect and defend human “dignity.”³²⁴ If an actor - a state, private entity, NGO, or IFI - acts to threaten the fundamental rights protected by IHRL mechanisms, that actor should assume duties to respect, protect, and fulfill those rights. If a private actor violates a principle codified as customary IEL, aggrieved parties (or their advocates) should have channels of effective legal relief. As Dine asserts, “the greater the power that property rights bestow, the greater the ensuing responsibilities.”³²⁵ Owning forest carbon may mean owning the resources that make life possible for some communities; the ensuing responsibilities are thus great.

Those negotiating the KP’s successor should revisit IHRL and IEL to assert the legal responsibilities of all actors who develop forest carbon projects and, indeed, other CDM projects. Private actors who benefit under the treaty regime should have corresponding responsibilities to respect the same international laws as nation states. IFIs that bankroll these projects, often to the benefit of private actors, should also be held to the same legal standards. The COP must devise clear rules, channels for grievances, fora to hear grievances, and effective remedies for those marginalized people and communities who find themselves on the losing end of projects without financial or institutional resources to defend themselves.

Private actors working outside the international treaty regime should be legally accountable to a rigorous, mandatory, uniform code of standards. Currently, it is 569 unclear whether forest carbon project developers are liable if human rights violations occur as a result of these investments. Do voluntary standards contravene states’ legal responsibilities to legislate and enforce their own environmental and human rights laws?³²⁶ Who will enforce the standards and impose penalties if project developers don’t deliver on their promises?³²⁷ Will a participating NGO invested in a project’s biodiversity-enhancing or poverty-alleviating benefits be able to advocate and critique objectively any prospective damaging aspects of forest carbon projects?³²⁸ Businesses aim to maximize short-term economic value for their stakeholders: Will they apply voluntary regulatory brakes that could threaten profits?

While I cannot answer these questions here, I do propose that we re-envision the forest carbon project process by first naming the most deeply equitable set of standards we can. All actors, whether private or treaty-based, investing in or financing these projects would then be bound by those standards. In other words, we should start with the laws and rules themselves, and then work backward to design a legal apparatus that can enforce and adjudicate breaches in those laws and rules. The prescriptions I have named here form my proposed start; designing the legal apparatus awaits another day.

319. MUCHLINSKI, *supra* note 86, at 536, 572.

320. LILLICH ET AL., *supra* note 208, at 397; DINE, *supra* note 199, at 188.

321. U.N. Econ & Soc. Council, Sub-Comm’n on the Promotion and Prot. of Human Rights, *Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with Regard to Human Rights*, para. 2, U.N. Doc. E/CN.4/sub.2/2003/12/Rev.2 (Aug. 26, 2003).

322. *Id.* para. 1.

323. DINE, *supra* note 199, at 42.

324. Universal Declaration of Human Rights, *supra* note 256, at pmbl.,

325. DINE, *supra* note 199, at 279.

326. Morrison & Roht-Arriaza, *supra* note 86, at 526.

327. Morrison & Roht-Arriaza, *supra* note 86, at 524.

328. MUCHLINSKI, *supra* note 86, at 554-55.

B. Home States as Duty Bearers

Nations bear the brunt of legal duties under IHRL and IEL. But in forest carbon schemes, neither host country nor home country have much incentive or, in some cases, adequate power to perform those duties. Northern countries have strong incentives to fund forest carbon deals as a cheap way of buying the right to pollute more at home, to please domestic private investors, and to promote biodiversity preservation and thus please ecologically conscious citizens and voters.³²⁹ Forest carbon projects offer inexpensive ways to offset required emissions reductions under the Kyoto Protocol and its successors. Norway has announced its plans to be “carbon neutral” by 2030, partly through investing enormously in forest projects in developing nations, and pending U.S. legislation would encourage REDD investments to offset mandatory emissions reductions.³³⁰ At the same time, nations can help fulfill their commitments to the EU’s target that member states contribute 0.7% of GDP to Overseas Development Assistance by 2015.³³¹ When these commitments act qua nations, they are legally bound to the strictures of these bodies of international law. McCorquodale & Simons argue that further obligations exist: when MNEs violate IHRL, home states are legally required to regulate them, including piercing the corporate veil to see what subsidiaries acting extraterritorially are controlled by home state parents.³³²

Using carbon credits to achieve GHG reduction goals may be an attractive alternative to actually cutting emissions. While citizens may be in favor of cutting GHG emissions in theory, their support may wane when they see the effects on their daily lives, such as higher taxes and fuel costs, curbs on where they can drive and fly, and product bans. Elected officials, once they get the good press that comes from being eco-friendly, will subsequently look for safety valves: ways to cushion the blows that GHG emissions reductions may rain on their citizens and their own political prospects. Northern leaders, who must curry favor with private business to gain or stay in power, have little reason to regulate their private industries’ acquisition of Southern forests. Northern actors profit not just through carbon offset trading but through associated business ventures.³³³ Northern national political leaders may thus be under strong pressure to help their businesses find options that allow them to offset required carbon reductions in the cheapest way possible while finding new and novel ways to reap other profits from the scheme. These same leaders may curry favor with environmentalists by overlooking possible IHRL violations that may accompany forest carbon projects that emphasize biodiversity preservation at the expense of local community needs.

Critics have labeled forest carbon schemes “CO2onialism,” and allege that by securing large tracts of Southern forests, Northern consumers and industries can continue business as usual and need make no painful changes in lifestyle, or make the difficult investments to transition to a post-hydrocarbon economy.³³⁴ Just as in traditional colonialism, forest carbon investments may transfer wealth from South to North. On the other hand, some investors may genuinely promote deep equity, and may genuinely desire to help poor communities adapt to climate change. Emerging voluntary standards such as those from CCB move in this direction; but investments that violate principles of deep equity—or violate 571 international law—are unlikely to receive scrutiny from the home countries of private investors.

C. Host States As Duty Bearers

International law is founded on the notion of sovereign equality, despite the fact that all nations are *not* equal. In deep equity terms, some nations—mostly in the North—possess resources that better allow them to fulfill their

329. Nelson, *supra* note 7, at 645; ERAKER, *supra* note 275, at 5, 21 (discussing cost effective emissions and detailing entities that will profit); see Takacs, *supra* note 25, at 64-69 (describing some of these projects and their national backers).

330. Elisabeth Rosenthal, *Lofty Pledge to Cut Emissions Comes With Caveat in Norway*, N.Y. TIMES, Mar. 22, 2008, at A1; H.R. 2454, *supra* note 12.

331. Laurence Boisson De Chazournes, *Technical and Financial Assistance*, in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW, *supra* note 43, at 951.

332. McCorquodale & Simons, *supra* note 206, at 615, 617.

333. A World Bank Report notes that “the most successful deals were those that went beyond contracting for carbon and included other relationships, viz. equity, debt, equipment sales, other commodity sales etc For example, a London-based carbon company reported in its public filings that it had purchased an equity share in a sugar company in Ethiopia. We expect such types of investment activity to continue and rapidly increase as carbon becomes just one of the many assets from which investors seek to correctly value and grow.” CAPOOR & AMBROSI, *supra* note 99, at 25.

334. HUMPHREYS, *supra* note 8, at 208; LOHMANN, *supra* note 8, at 344; ERAKER, *supra* note 275, at 12.

sovereign goals. While Southern host states have legal duties to respect, protect, and fulfill human rights for their people, that does not mean they have the financial and institutional means to do so in the face of powerful Northern state and corporate actors. All CDM projects need letters of approval from the host nation's DNA, who has the prerogative to judge whether a forest carbon project meets the nation's sustainable development goals.³³⁵ But if DNAs assiduously follow their nation's interests—say, by arguing that carbon should be sold for the best possible price—the developer may well go elsewhere, and Southern nations may engage in a race to the bottom to attract forest carbon investments.³³⁶

While human rights law requires Southern nations to supervise companies acting in their territory, this has been a struggle for cash-strapped governments.³³⁷ Even where governments have pro-poor, pro-human rights legislation or constitutional provisions, governments do not necessarily have the institutional resources to realize those laws.³³⁸ Southern nations, where deforestation produces the most GHG emissions, are also likely to have inadequate governance capacity.³³⁹ Southern nations require institutional adaptation aid to adjudicate complex carbon property rights,³⁴⁰ pierce corporate veils to trace responsibility, formulate and conduct grievance procedures, monitor human rights, seek redress for violations, and enforce “voluntary” standards. Moreover, forest carbon projects demand rarefied technological calculations, and many communities or nations simply lack the resources to do ecological or social assessments, and **572** therefore to respect, protect, and fulfill human rights.³⁴¹ Supervising negotiations, whether CDM or voluntary, and then enforcing the resulting contracts, is expensive.³⁴² What is more, voluntary market offsets, while hypothetically required to respect host country laws, are often conducted directly between developer and communities and may fly beneath the radar screen of the national government.

Hungry for aid, Southern leaders have a strong incentive to assert that reforestation or REDD projects were not planned, even if they were, leading to the problem of false additionality. Perversely, this may lead Southern nations to make sure their own environmental laws are not enforced, because they can develop voluntary or CDM projects that generate CER cash just for obeying laws already on the books.³⁴³ Governments own much of the forestland in the South, and those forests could be a lucrative source of income for governments. Why would they circumscribe what forest carbon actors can do?³⁴⁴ Furthermore, Southern leaders may use forest carbon projects as a way to gain state control of forestlands and their riches, where indigenous or other groups have held sway.³⁴⁵ Forest carbon projects may be captured by corrupt, elite, local and national figures who wish to profit from forest carbon.³⁴⁶ Southern nations were institutionally disadvantaged in international climate negotiations, so the legal apparatus and priorities have not been in their favor from the start.³⁴⁷

D. Extraterritoriality

In most forest carbon projects, developers from Northern nations invest in forests in a distant Southern nation. This compounds the ability of state and private actors to elude the weak clutches of international law. IHRL

335. Scholz & Jung, *supra* note 78, at 79; Locatelli et al., *supra* note 211, at 114.

336. Nelson, *supra* note 7, at 639; LOHMANN, *supra* note 8, at 180-81; Swallow et al., *supra* note 140, at 9; Ascui & Costa warn that “[i]nterference by DNAs in pricing creates uncertainty The results will ultimately be economically detrimental to the country, as investors will, *ceteris paribus*, look elsewhere for credits.” Francisco Ascui & Pedro Moura Costa, *A Project Developer's Perspective: CER Pricing and Risk*, in EQUAL EXCHANGE, *supra* note 6, at 83.

337. MUCHLINSKI, *supra* note 86, at 536. *See, e.g.*, Soc. and Econ. Rights Action Ctr. v. Nigeria, Comm. No. 155/96, paras. 46, 57, 58 (African Comm'n on Human and Peoples' Rights 2001) (holding that Nigeria failed to protect the citizens of Ogoniland from various civil and political, economic, social, and cultural, and environmental human rights violations committed by multinational oil companies).

338. Bracer et al., *supra* note 6, at 35.

339. Charlotte Streck et al., *Creating Incentives for Avoiding Further Deforestation: The Nested Approach*, in CLIMATE CHANGE AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES, *supra* note 2, at 240-41; COTULA & MAYERS, *supra* note 8, at 7.

340. Miller et al., *supra* note 257, at 166; COTULA & MAYERS, *supra* note 6, at 13; *See* TAKACS, *supra* note 2, at 49.

341. Schwartz, *supra* note 295, at 470.

342. Ofosu-Ahenkorah, *supra* note 6, at 128; Locatelli et al., *supra* note 211, at 115.

343. LOHMANN, *supra* note 8, at 177-78.

344. HUMPHREYS, *supra* note 8, at 207; Gelling, *supra* note 9.

345. GRIFFITHS, *supra* note 8, at 5, 14.

346. *Id.* at 13; ROE ET AL., *supra* note 8, at 4.

347. Mace, *supra* note 34, at 5.

supposes that each nation state is responsible for the human rights of its citizens. Some legal scholars and activists promote the norm that human rights and environmental responsibility *ought* not stop at national borders, and ground the norm in a growing corpus of international law that suggests that nations *are* responsible for promoting and not transgressing human rights across national borders.³⁴⁸ That is, sovereignty should not, and does not preclude transboundary responsibility for respecting, protecting, and fulfilling dignified lives for all Earth's citizens. In fact, nations are denied sovereignty to control their own resources and to fulfill their own mandated IHRL or IEL responsibilities if powerful private actors fomenting 573 forest carbon projects undercut a government's ability to care for its people. Not only ought states to control their own private actors that potentially undercut lives and livelihoods across national borders; those private actors themselves ought to carry human rights and environmental liability when they do so, whether or not they are operating in their home country.

GHG emissions disperse globally, and thus liability, causation, and redress are legally complicated for damages due to global climate change in general.³⁴⁹ However, this is not the case for forest carbon investments, where a discrete set of actors operate in a discrete physical territory. Actors from a foreign nation should meet legal constraints if they threaten to interfere with national sovereignty, undermining the legal rights and responsibilities of a nation to control its territory and protect its people.

V. CONCLUSION

Forest project investments can contribute to a deeply equitable world. An *individual* who is economically more secure, whose land tenure is recognized, who has learned new trades and skills, is one whose socioeconomic adaptation to global climate change has been abetted by such investments. A *community* is more secure and can realize its potential if its individuals' potentials are realized, if it gains infrastructure and has strengthened governance institutions from proposing, negotiating, managing, and monitoring its own projects. An *ecosystem* is more secure if its full sustainable value is realized by the people who depend on it as the ultimate source of all life and livelihood, and who ultimately must protect it if it is to provide services locally and globally.

An international legal system adequate to regulate forest carbon and to promote deep equity would ensure that projects disproportionately benefit poor people, communities, and nations. Forest carbon projects would foment genuine socioeconomic, ecological, and institutional adaptation in those countries. An ideal, law-abiding, deeply equitable forest carbon project protects or restores healthy forests. Local people gain disproportionately more wealth compared to Northern investors as a result. Local communities instigate the project; if not, they are not merely consulted, but are full and equal partners, with honest brokers assisting them in negotiations, and full and transparent domestic and international grievance processes. Treaty-based offsets are only permitted once a polluting nation or entity has made deep cuts in both GHG emissions and demand for forest products; offsets would not implicitly legitimate pollution or overconsumption.

Voluntary standards would be enforceable and enforced. Human rights bodies would have legal teeth. Polluters would be fined to help the victims of their 574 pollution adapt. CBDR would require genuine reductions in Northern carbon emissions accompanied with transfusions of adaptation aid - cash, clean technologies, and reforestation/REDD assistance to communities on the losing end of GHG pollution. NGOs and other honest brokers would act as ombudspersons to represent those lacking means. Private actors would be directly responsible for human rights or IEL violations, in whatever territory they occurred, as would the home and host nations who ought to be supervising them due to their own responsibilities to respect, protect, and fulfill human rights. Local, national, and international legal organs would hear grievances and mete out appropriate remedies when legal norms are violated. Local people would be empowered to stop any project that violated their human rights or principles of domestic or international environmental law. In fact, they would spearhead and profit from any forest carbon project that would further healthy individuals, communities, and ecosystems.

348. SKOGLY, *supra* note 201, at 3, 52, 207-8; Meron, *supra* note 204, at 78, 81, 82.

349. Aminzadeh, *supra* note 76, at 240-41.

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