

1-1-2009

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Recommended Citation

David Takacs, *Carbon Into Gold: Forest Carbon Offsets, Climate Change Adaptation, and International Law*, 15 *Hastings West Northwest J. of Env'tl. L. & Pol'y* 39 (2009)

Available at: https://repository.uchastings.edu/hastings_environmental_law_journal/vol15/iss1/6

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Carbon Into Gold: Forest Carbon Offsets, Climate Change Adaptation, and International Law

*David Takacs**

List of Acronyms:

CBDR: common but differentiated responsibility
CCBA: The Climate, Community, and Biodiversity Alliance
CDCF: Community Development Carbon Fund (World Bank)
CDM: Clean Development Mechanism
CERs: Certified Emissions Reductions
COP: Conference of the Parties
DNA: Designated National Authorities
DOE: Designated Operational Entity under the CDM
EB: Executive Board of the CDM
EIA: Environmental Impact Assessment
FCOs: forest carbon offsets
FCPF: Forest Carbon Partnership Facility (World Bank)
FDI: Foreign Direct Investment
GCC: Global Climate Change
GEF: Global Environment Facility
GHGs: greenhouse gases
IFIs: international financial institutions
LULUCF: Land Use, Land-Use Change and Forestry
MEAs: multinational environmental agreements
MNEs: multinational enterprises
NGOs: nongovernmental institutions
PDD: Project Design Document (required under the CDM)
tCERs: temporary certified emissions reductions
UNDP: United Nations Development Programme
UNECE: United Nations Economic Commission for Europe

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UNEP: United Nations Environment Programme

UNFCCC: United Nations Framework Convention on Climate Change

Introduction

One of the major impediments to financing adaptation to climate change is the legal mechanisms thus far developed that control financing adaptation to climate change.

“Common but differentiated responsibility” (CBDR) is not only an emerging principle of customary international environmental law; it is also the ethical and legal anchor of the UN Framework Convention on Climate Change (UNFCCC)¹ and the Kyoto Protocol.² Those who have contributed least to global climate change will bear the greatest burden of its ravages. While CBDR requires that all nations contribute to climate change mitigation and adaptation, developed (“Northern”³) nations have a legal obligation to make greater contributions. The *legal* obligations encoded in the climate change conventions, which require disparate contributions to mitigation and adaptation, stem from pragmatic reality rooted in ethical obligation. *Pragmatically*, those nations who have the resources to mitigate and help others adapt bear primary responsibility to do so; *ethically*, because those resources are derived from activities that pollute(d) the global commons, polluting nations should bear the primary responsibility to clean up the global atmospheric commons and help others adapt to the mess we have made en route to economic ascendancy.

However, under the Kyoto Protocol, various “flexibility mechanisms” allow Northern nations and private actors to avoid meeting their committed amount of emissions reductions. Instead, they can trade credits allowing pollution, and offset emissions by investing in Clean Development Mechanism (CDM) projects in developing (Southern) nations.⁴ Under the Kyoto Protocol, these CDM projects are also the primary means of helping Southern nations adapt to global climate change.⁵ Financial and legal

1. United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 107, 31 I.L.M. 849 (entered into force Mar. 21, 1994) [hereinafter].

2. Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10, 1997, 37 I.L.M. 22 [hereinafter Kyoto Protocol].

3. Or “Annex 1” nations in the UNFCCC/Kyoto Protocol. I will use the more general “Northern” and “Southern” nations throughout.

4. Kyoto Protocol, *supra* note 2, Articles 6, 12, & 17. The Clean Development Mechanism allows Northern nations or private entities to continue to emit a certain amount of greenhouse gases in exchange for reducing emissions the same amount in a Southern nation.

5. Ian H. Rowlands, *Atmosphere and Outer Space*, in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW 315, 331 (Daniel Bodansky et al. eds., 2007).

systems that harness these flexibility mechanisms are developing with breakneck speed under the formal international legal regime, and an exploding voluntary market in carbon trading and carbon offsets rides their coattails (or, more accurately, leads). Actors in the North have invested much ingenuity in developing systems of greenhouse gas trading and offsets that have overshadowed international negotiations on creative, effective, alternative next steps to mitigate and adapt to global climate change.

Under the Kyoto Protocol, Northern actors are allowed to continue to emit greenhouse gases to the extent that they “offset” those emissions through reforestation efforts, often in the global South.⁶ In the voluntary market, private actors develop reforestation or “avoided deforestation” projects, whose carbon credits they sell to investors. Many private actors in the global North profit economically from forest carbon offset (“FCO”) projects that *may* help local human and nonhuman communities in the global South adapt to climate change, but that may also do them more harm than good.

At the heart of the critique I offer of most current FCO adaptation schemes is this: FCOs are not often based on ecological necessity, sustainable development needs, or on the legal/ethical obligation of common but differentiated responsibility. Rather, they focus on economic efficiency. The criteria for much international climate change “aid” is not necessarily about mitigating greenhouse gas emissions, helping developing nations or poor communities adapt, or conserving biodiversity. Instead, a coterie of actors with overlapping interests has devised complex systems that turn environmental obligations into efficient economic transactions. FCOs often focus on economic expediency as the primary criterion in mitigation and adaptation, while doing little to help the poor adapt, which is exactly the opposite of what CBDR proposes and requires. A major challenge to helping Southern nations cope with global climate change is to scuttle this economic focus and instead make genuine adaptation the focus and not an afterthought of the international climate legal regime. This is linked to an even greater challenge of developing robust international legal institutions capable of constraining capitalism in order to ensure the continued health and survival of human communities and the ecological communities on which humans depend.

In this paper, I first provide an overview of the treaty framework for global climate change mitigation and adaptation. I explain the legal principles – both grounded in the treaty and based on customary norms – that could or do provide the basis for judging actors in climate change adaptation. I explain how deforestation contributes to global climate

6. U.N. ENV. PROGR. [UNEP] RISOE CENTRE, LEGAL ISSUES GUIDEBOOK TO THE CLEAN DEVELOPMENT MECHANISM 42 (2004), <http://www.cd4cdm.org/Publications/CDM%20Legal%20Issues%20Guidebook.pdf>.

change, and how forest carbon offsets propose to staunch this problem. Through case studies, I explain the major players in both the CDM and voluntary market in forest carbon offsets, and how they have created a system where they benefit economically without necessarily doing much to mitigate greenhouse gas emissions, conserve biodiversity, or help the poor adapt to the effects of climate change. I close with a legal analysis of FCOs, and I propose how to use the law to foment genuine adaptation, including judicious use of carefully implemented and monitored FCOs, in the global South. I point to several efforts that are under way to do so, but also point to the need for strengthened systems of international environmental and human rights law capable of monitoring and enforcing FCOs.

I do not intend this article as a screed against capitalism. I am not critiquing the general notion of doing well by doing good; in fact, I entered into this research hopeful that I would find a paradigmatic example of how linking social entrepreneurship to capitalism could help save the world by mitigating greenhouse gas accumulation, using markets to help poor communities adapt to global climate change, and saving biodiversity at the same time, while providing the “do-gooder” entrepreneurs with a living. While I still believe this is possible, it will require much more attention to international human rights and environmental law, and development of mechanisms that craft, monitor, and enforce these laws. Indeed, some efforts are underway that would do much more to promote ecological and social resiliency in FCOs; I will discuss them below.

However, to the extent that capitalist actors can be judged by their deeds (not their words), the past decade in FCOs has largely seen the market replace law and governance, and profit trump social welfare or ecological function. Projects to sequester carbon in forests have allowed the wealthy to sequester further wealth far out of proportion to the carbon sequestered. Without a robust system of international legal principles and enforcement mechanisms, I believe that tropical forests will continue to disappear, greenhouse gas concentrations will continue to rise, and the poor (and perhaps the rich) will be unable to adapt successfully to global climate change.

Global Climate Change and Forest Carbon Offsets

Industrialization has come with many costs, including widespread pollution of the global atmospheric commons. As greenhouse gases (“GHGs”) accumulate in the atmosphere at concentrations significantly above pre-industrial levels, scientists have sounded the alarm about the consequences these changes in GHG concentrations portend for human and

nonhuman communities.⁷ In recent years, alert citizens and political leaders have heeded these alarms about global climate change, and have begun to press for changes to business as usual.

Climate change threatens survival of many species in temperate and tropical ecosystems, and threatens the functioning of those ecosystems themselves. For humans, climate change will hit the poor particularly hard,⁸ as they lack the means to adapt to deepening drought, more violent storms, elevated heat, increasing floods from melting glaciers, rising sea levels, and various other (un-) natural⁹ phenomena. Political and policy responses to climate change have addressed both mitigation and adaptation. First, it has seemed sensible to try to reduce the rate at which GHGs are accumulating in the atmosphere, thus mitigating the problem. But given that the wheels of climate change have already been set in motion and, despite legal and voluntary responses, GHG concentrations are still increasing. Therefore, programs to help human populations adapt to global climate change must also be established. When I refer to “adaptation” in this paper, I am referring to building ecological and social community resiliency to climate change.

7. See, most recently, the statement posted by the National Science Academies of 13 nations, including those of the G-8: Joint Science Academies’ Statement: Climate Change Adaptation and the Transition to a Low Carbon Society (June 2008), <http://www.nationalacademies.org/includes/climatechangestatement.pdf>.

8. Andrew C. Revkin, *Poor Nations to Bear Brunt as World Warms*, N.Y. TIMES, Apr. 1, 2007, available at <http://www.nytimes.com/2007/04/01/science/earth/01climate.html>; 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, 619 (2004); RODA VERHEYEN, CLIMATE CHANGE DAMAGE AND INTERNATIONAL LAW: PREVENTION DUTIES AND STATE RESPONSIBILITY 34 (2005); M.J. Mace, *Adaptation Under the UN Framework Convention on Climate Change: The Legal Framework* (Sept. 2003) (presented at ‘Justice in Adaptation to Climate Change,’ at the Zuckerman Institute for Connective Environmental Research University of East Anglia), <http://www.field.org.uk/files/Adaptation-Tyndall%20Paper-MACEAugust%2023-FINAL.pdf>; Kenneth M. Chomitz et al., *At Loggerheads: Agricultural Expansion, Poverty Reduction, and Tropical Forests*, WORLD BANK, 2007, at xi, http://www-wds.worldbank.org/external/default/WDSContentServer/IW3P/IB/2006/10/19/000112742_20061019150049/additional/ixviiiPRRALFMweb.pdf; UNITED NATIONS DEVELOPMENT PROGRAMME, HUMAN DEVELOPMENT REPORT 2007/2008: FIGHTING CLIMATE CHANGE: HUMAN SOLIDARITY IN A DIVIDED WORLD 8 (2007), [hereinafter UNDP] (Their 2007 HDR is primarily dedicated to the links between (un)sustainable development and (un)mitigated global climate change).

9. One of the earliest authors writing for a general audience to presage global climate change’s ravages was BILL MCKIBBEN, *THE END OF NATURE* (1989). McKibben argued that weather phenomena were no longer “natural” because humans were changing the very climate system that had previously been beyond our means to impact.

By ecological resiliency, I mean protecting and preserving the natural ecosystems that help human communities survive through buffering from floods, filtering drinking water, stabilizing soil, providing sustainable forest products, and preserving a host of other ecosystem services necessary for human survival. (I am not referring to preserving functioning ecosystems and their myriad component species for their own sake; while this is, to me, ethical and desirable, and is the subject of other multilateral environment agreements (MEAs) (e.g., Convention on Biological Diversity, Ramsar Convention on Wetlands),¹⁰ it is by and large not the focus of the legal climate regime.) By social resiliency, I mean forging the democratic capacity to help marginalized communities accrue the administrative, technical, and political power that will help them make difficult decisions and survive the coming vicissitudes of nature and the coming economic and political upheavals (some of which are the subject of this paper) that are now befalling and will continue to befall them.¹¹

The Global Climate Change Treaty Regime

The United Nations Framework Convention on Climate Change (“UNFCCC”) set goals for the world’s nations to reduce their greenhouse gas (“GHG”) emissions in order to mitigate global climate change.¹² The 1997 Kyoto Protocol, which entered into effect in 2005, spelled out the terms that legally bind signatory nations.¹³ “Annex 1” nations – nations of the “North” – have been primarily responsible for greenhouse gas (GHG) build-up, and their economic development has allowed them the financial and technical

10. Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, *available at* <http://www.cbd.int/convention/convention.shtml>; Ramsar Convention on Wetlands, Ramsar, Iran, 2 Feb. 2, 1971, *available at* http://www.ramsar.org/key_conv_e.htm.

11. WORLD BANK, BIO CARBON FUND 9-10 (2007), *available at*; Ramsar Convention on Wetlands, Ramsar, Iran, 2 Feb. 2, 1971, *available at* http://www.ramsar.org/key_conv_e.htm. <http://carbonfinance.org/Router.cfm?Page=BioCF&ItemID=9708&FID=970>; C. Bracer, S. Scherr, A. Molnar, M. Sekher, B.O. Ochieng, & G. Sriskanthan, *Organization and Governance for Fostering Pro-Poor Compensation for Environmental Services: CES Scoping Study Issue Paper no. 4* at 35 (ICRAF Working Paper no. 39, World Agroforestry Centre, 2007); Brian Walsh, *Getting Credit for Saving Trees*, TIME July 12, 2007; Alfred Oforu-Ahenkorah, *CDM Participation and Credit Pricing in Africa* in EQUAL EXCHANGE: DETERMINING A FAIR PRICE FOR CARBON 133 (Glenn Hodes & Sami Kamel, eds., 2007) *available at* <http://www.cd4cdm.org/Publications/Perspectives/FairPriceCarbon.pdf>; KATOOMBA GROUP, GETTING STARTED: AN INTRODUCTORY PRIMER TO ASSESSING AND DEVELOPING PAYMENTS FOR ECOSYSTEM SERVICE DEALS 17 (2007), *available at* <http://www.katoombagroup.org/documents/publications/GettingStarted.pdf>.

12. UNFCCC, *supra* note 1.

13. Kyoto Protocol, *supra* note 2.

means to mitigate this pollution.¹⁴ This notion of “common but differentiated responsibility” (CBDR), which I will explain further below, is the guiding principle for the UNFCCC/Kyoto Protocol. Under the rubric of CBDR, Northern nations pledged themselves to various degrees of emissions reduction, aiming to reduce GHGs by at least 5 percent below 1990 levels, as measured during the commitment period of 2008-2012.¹⁵ All Northern nations except the U.S. have ratified the Kyoto Protocol.¹⁶ By the Kyoto Protocol’s terms, Southern nations have no binding GHG reduction targets, but nonetheless under CBDR have joint obligations to work towards curbing climate change.¹⁷

Customary Norms of International Environmental Law

I argue here that Northern nations are *legally* obligated to provide adaptation aid to Southern nations that helps communities become more socially and ecologically resilient when faced with global climate change. Even if they are not currently legally obliged to do so, I believe private actors investing in FCOs ought to follow those same legal strictures as anyone providing adaptation aid. International law should stipulate that any FCOs that result in a net transfer of wealth from South to North, or that disinvest poor people of their means of subsistence, are illegal.

While international environmental law usually focuses on the obligations of nation-actors, many scholars and activists argue that these same norms should also apply to non-state actors, including multinational enterprises (MNEs), and international financial institutions (IFIs). An exhaustive review of this literature is not possible here. Professor Peter Muchlinski notes, “[a]t present there are no detailed international rules, or procedures, for the environmental regulation of MNEs.”¹⁸ He characterizes as “weak” the evidence that corporate social actors are liable in domestic courts for violations of principles of customary international environmental

14. Anita M. Halvorsen, *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, 254-55 (2007).

15. 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).

16. The newly elected Prime Minister of Australia, Kevin Rudd, signed the Kyoto Protocol as his first act of office on December 3, 2007, leaving the United States alone among the Northern nations in failing to ratify the Kyoto Protocol. Reuters, *Australian Leader Ratifies Kyoto Pact*, N.Y. TIMES, Dec. 3, 2007.

17. Kevin Baumert, *Participation of Developing Countries in the International Climate Change Regime: Lessons for the Future*, 38 Geo. Wash. Int’l L. Rev. 365, 381 (2006).

18. Peter T. Muchlinski, *MULTINATIONAL ENTERPRISES & THE LAW* 566 (2007).

law.¹⁹ Steven R. Ratner describes the “doctrinal straitjacket” that prioritizes *state* responsibility and duties in international environmental law.²⁰ Private actors may pollute, or, as is the case in FCOs, foment environmental change across national boundaries. Muchlinski argues that private actors should be controlled by both home and host country when acting as CDM project developers, and when acting under the CDM, I believe private actors should be bound by the legal norms encoded within the UNFCCC/Kyoto Protocol.²¹ But while international human rights law requires the home states of these companies to regulate them from committing human rights violations under the auspices of the voluntary market, they have little incentive to do so and face little prospect of sanctions for their failure.²² Host states, particularly in the South, may lack the expertise, capacity, and power to regulate, and may be willing to accept whatever Foreign Direct Investment (FDI) is proffered, particularly if powerful elites in the host country are benefiting.²³ Thus, Ratner criticizes the “anachronistic” emphasis on state responsibility in the age of nimble, protean multinational enterprises.²⁴

Even if private actors are not currently legally bound by international environmental legal norms, or do not consider themselves legally bound by them, the norms are available for adoption as ethical principles and “best practices” that I believe private actors ought to follow. To the extent that international environmental law does not regulate private actors investing in FCOs, the international legal system ought to be reformed so that private actors do have clear legal responsibilities to foment genuine adaptation within the guiding framework of principles of customary international environmental law, and legal principles encoded in the UNFCCC/Kyoto Protocol and its prospective successor.

When considering customary international environmental law, one must be careful of the “myth system,” i.e., principles that represent the

19. *Id.* at 572.

20. Steven R. Ratner, *Business*, in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW, *supra* note 5, at 807, 808, 811.

21. Muchlinski, *supra* note 18, at 571.

22. Ratner, *supra* note 20, at 809.

23. *Id.* at 810; BRACER ET AL., *supra* note 11, at 35; Charlotte Streck, Lucio Pedoni, Manuel Estrada Porrua, & Michael Dutschke, *Creating Incentives for Avoiding Further Deforestation: The Nested Approach* in CHARLOTTE STRECK, ROBERT O’SULLIVAN, TOBY JANSON-SMITH, & RICHAD TAROSOFKY, eds., CLIMATE CHANGE AND FORESTS; EMERGING POLICY AND MARKET OPPORTUNITIES 240-41 (London, 2008); DAVID HUMPHREYS, LOGIAM: DEFORESTATION AND THE CRISIS OF GLOBAL GOVERNANCE 207 (2006); Tom Griffiths, Seeing ‘Red’? ‘Avoided Deforestation’ and the Rights of Indigenous Peoples and Local Communities, Forest Peoples Programme, at 5, 13, 14 (June 2007), http://www.forestpeoples.org/documents/ifi_igo/avoided_deforestation_red_jun07_eng.pdf.

24. Ratner, *supra* note 20, at 816.

cherished norms of international environmental lawyers and activists, but don't reflect actual state practice.²⁵ With that proviso, legal scholars see a number of principles of environmental law as emerging customary international law, finding their way into international and regional conventions, national constitutions, and international and domestic legal opinions.²⁶ Several of these codify principles of equity where international environmental law coincides with international human rights law, where commitment to the environment dovetails with commitment to social justice. At very least, these principles provide a guiding framework for a robust system of international environmental legal principles that *ought* to guide FCOs and ought to bind all actors (state and private) who develop and monitor FCO projects.

Preventative Principle

The arbitration panel for the famous 1937 *Trail Smelter* case named the *preventative principle*: "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."²⁷ This is both about damage to territory, and the health of "persons" living in that neighboring territory. The preventative principle has become a cornerstone of customary international environmental law, as embodied by Principle 21 of the 1972 Stockholm Declaration, requiring a kind of due diligence, or state "responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction."²⁸ The UNFCCC's Preamble reifies Principle 21, emphasizing 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

25. Daniel Bodansky, *Customary (and Not So Customary) International Environmental Law*, 3 *IND. J. GLOBAL LEGAL STUD.* 105, 116 (1995).

26. For a good review, see Pierre-Marie Dupuy, *Customary Law and General Principles*, in *THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW*, *supra* note 5, at 449, 453. Dupuy states that "customary international environmental law is both omnipresent and of paramount importance."

27. *Trail Smelter Case* (U.S. v. Can.), 3 *R. Int'l Arb. Awards* 1905 (Trail Smelter Arb. Trib. 1938 & 1941).

28. U.N. Env. Progr. [UNEP], *Declaration of the United Nations Conference on the Human Environment* (June 5-16, 1972), Principle 21, available at <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=97&ArticleID=1503>.

the limits of national jurisdiction.²⁹ In the context of climate change, this is an equity argument for mitigation; i.e., polluters should emphasize preventing GHG emissions. It is also an argument that FCOs fomenting adaptation across boundaries should not damage the host country's environment.

Polluter Pays Principle

As Northern nations continue to emit vast quantities of GHGs, they violate the preventative principle, and thus the *polluter pays* principle steps in as backstop. The Rio Declaration's Principle 16 prescribes: "National 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."³⁰ Taken in conjunction with CBDR (see below), this is a moral and legal presumption that those whose pollution is causing global climate change should also be mitigating GHG emissions and helping others adapt to the pollution's negative toll.³¹ Sunstein describes such GHG pollution as a kind of tort, where polluters who have gained economically from their pollution ought to pay for the damage they have caused.³² The polluter pays principle is the most robust example of duties that apply to transnational corporations, found in numerous multilateral environmental agreements that direct legal responsibility on corporations for transboundary pollution they create.³³ To the extent that FCOs constitute appropriate "payment" for past GHG pollution, they fulfill a customary international environmental legal obligation that the polluter should pay for its acts. But FCOs that compensate the project developer, rather than the communities harmed by climate change, violate this legal precept.

Environmental Democracy

Environmental democracy is an emerging norm at the intersection of environmental and human rights law.³⁴ Principle 10 of the Rio Declaration

29. UNFCCC, *supra* note 1, Preamble.

30. U.N. Env. Progr. [UNEP], *Rio Declaration on Environment and Development, United Nations Conference on Environment and Development*, (June 3-14, 1992), available at <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=78&ArticleID=1163> [hereinafter Rio].

31. UNDP, *supra* note 8, at 41.

32. Cass Sunstein, *Of Montreal and Kyoto: A Tale of Two Protocols*, 31 HARV. ENVTL. L. REV. 1, 54 (2007).

33. Ratner, *supra* note 20, at 813.

34. SUMUDU A. ATAPATTU, *EMERGING PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW* 289 (2006).

encourages 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.³⁵ The October 2007 U.N. “[n]on-legally binding instrument on all types of forests” declares 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.”³⁶ Also under this aegis fits the requirement of Environmental Impact Assessments (EIAs) with full public input and participation,³⁷ and a general right of access to just governance. The United Nations Economic Commission for Europe (UNECE) Aarhus Convention is at the forefront of attempts to codify and implement these principles of environmental democracy, but they are finding their way into other multinational environment agreements (MEAs) and into national constitutions or statutes.³⁸ Citizens – particularly those who are likely to be affected by an FCO – should be able to review and comment before any trading scheme is implemented, and should be able to prevent unjust trading schemes. In fact, in an ideal environmental democracy, these offsets should be proposed by community members whose forests are to become marketable carbon reservoirs.

Common But Differentiated Responsibilities (CBDR)

Northern nations are legally obliged to fund mitigation and adaptation strategies in the South that will help avoid human rights and ecological cataclysms that result from the North’s responsibility for creating climate change. The legal obligations come first from CBDR’s status as an emerging principle of customary international environmental law.³⁹ But CBDR is also the explicit legal foundation of the UNFCCC/Kyoto Protocol, as named in Article 3 of the UNFCCC:

35. Rio, *supra* note 30, Principle 10.

36. U.N. Forum on Forests, Oct. 17, 2007, *Non-Legally Binding Instrument on All Types of Forests*, U.N. Document A/C.2/62/L.5 (Oct. 22, 2007).

37. Rio *supra* note 30, Principle 17; Ulrich Beyerlin, *Different Types of Norms in International Environmental Law: Policies, Principles, and Rules*, in *THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW* 425, *supra* note 5, at 439.

38. U.N. Econ. Comm’n for Europe, *Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters*, U.N. Document. ECE/CEP/43 (June 25, 1998), available at <http://www.unece.org/env/pp/documents/cep43e.pdf>.

39. Halvorsen, *supra* note 15, at 254.

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.⁴⁰

This principle of CBDR appears throughout the UNFCCC and Kyoto Protocol.⁴¹ CBDR has been called the “ethical anchor” of the Kyoto Protocol. One could also call it the *legal* anchor.⁴² Because Northern nations have created and continue to create disproportionate GHG pollution (e.g., the 19 million residents of New York State produce more GHGs than the 766 million people living in the 50 least-developed countries;⁴³ the U.S. currently produces about 19 percent of GHGs⁴⁴ and has emitted 30 percent of GHGs between 1850-2000⁴⁵) and disproportionately profit from it, and because Southern nations will disproportionately suffer from climate change’s ravages, the North has the legal responsibility – and the financial and technological means – to mitigate the problem.⁴⁶

FCO projects that respect CBDR and genuinely mitigate Northern emissions while helping the South adapt to global climate change would help fulfill this obligation; but any such projects that allow the North to evade legal responsibility to reduce their own emissions, and that further undercut the South’s ability to adopt, violate the equity-enhancing underpinnings of CBDR. Southern nations also have CBDR obligations under the climate treaties, i.e., while they have no binding emissions reduction targets, they must still work to mitigate climate change. For example, they must establish a Designated National Authority (DNA) who

40. UNFCCC, *supra* note 1, Art. 3.

41. *Id.*, Preamble; Art. 4, para. 1; Art 4, para 4(1)(e); Art 4, para. 3; Art 4(7); Kyoto Protocol, *supra* note 2, Art 10; Art 10(c).

42. Lavanya Rajamani, *The Nature, Promise, and Limits of Differential Treatment in the Climate Regime*, 16 YB IEL 81, 86 (2007).

43. UNDP, *supra* note 8, at 43.

44. Pew Center on Global Climate Change, <http://www.pewclimate.org/facts-and-figures/international/annual-emissions>.

45. Pew Center on Global Climate Change, <http://www.pewclimate.org/facts-and-figures/international/cumulative>.

46. 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 (1997); Halvorssen, *supra* note 15, at 254.

will assist CDM project developers and will approve or reject proposed CDM projects.⁴⁷

As noted above, principles of international environmental law tend to apply to nation states, but not private actors. Whether or not private actors working to develop CDM FCOs under the Kyoto Protocol are bound by the legal principles that undergird the treaty remains unclear. When the climate conventions discuss CBDR, it is in the context of “Parties,” and these Parties are nation-states. For example, the Preamble to the UNFCCC “calls for the widest possible cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions”⁴⁸

One could argue that where the treaties do *not* specify that Parties are states, they are referring more generally to a broader array of actors with legal duties. But the UNFCCC always refers to “Parties” in a context where the clearest legal reading is to States as parties. While the UNFCCC does not define “Party,” the Kyoto Protocol does: “‘Party’ means, unless the context otherwise indicates, a Party to this Protocol.”⁴⁹ Article 12.9 of the Kyoto Protocol permits “[p]articipation under the clean development mechanism, including in activities mentioned in paragraph 3(a)⁵⁰ above and in the acquisition of certified emission reductions, may involve private and/or public entities, and is to be subject to whatever guidance may be provided by the Executive Board (EB) of the clean development mechanism.”⁵¹ Thus private entities participate in CDM project development (and indeed are the primary proponents of these projects), but it remains unclear whether they are “Parties” who are legally required to operate within the CBDR framework that guides State actors.

Absent clear guidance from the EB or the Conference of the Parties (COP), a narrow reading of the legal obligations of CBDR seems appropriate. International law depends on the nation state as duty bearer and prosecutor.⁵² And in FCOs, nation states are in violation of the various principles, including the explicitly codified CBDR. Northern nation states are seldom the direct investors in FCOs, either under the CDM or voluntarily

47. Karen Capoor & Philippe Ambrosi, *State and Trends of the Carbon Market 2006: Focus on Africa*, WORLD BANK, 2006, at 24, http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2007/02/26/000090341_20070226114316/Rendered/PDF/386180AFR0Carb1s1on1Africa01PUBLIC1.pdf.

48. UNFCCC, *supra* note 1, Preamble.

49. Kyoto Protocol, *supra* note 2, Art 1.6.

50. *Id.*, Paragraph 3(a) of Art. 12: “Parties not included in Annex I will benefit from project activities resulting in certified emission reductions.”

51. *Id.*, Art 12.9.

52. Ratner, *supra* note 23, at 807, 808, 811, 816.

(although Norway is planning to invest over a half-billion U.S. dollars per year in these projects in a drive to become “carbon neutral”⁵³). But Northern nations are failing to take significant steps to help Southern nations adapt, either as part of the formal climate change legal regime or otherwise. And they are failing to police their private actors who are profiting handsomely from FCOs, whether or not these projects do anything to help Southern communities adapt to GCC. Southern nations are not exempt from CDM responsibilities; at very least, under the CDM, their DNAs should refuse to permit FCOs that do not help – and may hurt – local communities,⁵⁴ or are questionable ecologically (e.g., using non-native species like eucalyptus⁵⁵). But what power or incentives do cash-strapped Southern nations really have against powerful Northern capitalists (or their own elites who may be profiting) who see in their forests new sources of profit, and who are spinning carbon into gold?

The Clean Development Mechanism

Northern nations can escape real reductions to emissions through a variety of “flexibility mechanisms.” They can trade emissions credits amongst themselves,⁵⁶ or invest in Clean Development Mechanism (CDM) projects in the South.⁵⁷ The CDM hypothetically allows Northern nations to transfer clean technology and wealth to Southern nations to help the latter develop sustainably and cleanly, while allowing Northern nations to offset

53. Elisabeth Rosenthal, *Lofty Pledge to Cut Emissions Comes With Caveat in Norway*, N.Y. TIMES, March 22 2008, <http://www.nytimes.com/2008/03/22/world/europe/22norway.html?scp=1&sq=Rosenthal+Norway&st=nyt>.

54. Capoor & Ambrosi, *supra* note 47, at 24; Johannes Ebeling, *Risks and Criticisms of Forestry-Based Climate Change Mitigation and Carbon Trading* in, Streck et al. eds., *supra* note 23, at 54.

55. Larry Lohmann, *Carbon Trading: A Critical Conversation on Climate Change, Privatization and Power*, DAG HAMMARSKJOLD CENTRE DEVELOPMENT DIALOGUE No. 48, Sept. 2006, at 227, 238, 240, 267, 306, http://www.dhf.uu.se/pdfiler/DD2006_48_carbon_trading/carbon_trading_web_HQ.pdf. Non-natives, including Eucalyptus, are to be planted as part of both the Chinese and Tanzanian case studies I discuss here; *See Facilitating Reforestation for Guangxi Watershed Management in Pearl River Basin: Project Design Document*, July 21, 2006 at 2, 13, 24, <http://cdm.unfccc.int/User Management/FileStorage/7Y41M57708ZDR95GDFS8LGOZLPC7ZL> [hereinafter PDD Guangxi]; *Afforestation in grassland areas of Uchindile, Kilombero, Tanzania & Mapanda, Mufindi, Tanzania: Project Design Document*, July 26, 2007, at 4, 5, 15, http://www.netinform.net/KE/files/pdf/PDD_GRL_version_26July_rev3.pdf [hereinafter PDD Uchindile].

56. Kyoto Protocol, *supra* note 2, Art. 17; Halvorsen, *supra* note 30 at 257.

57. Kyoto Protocol, *supra* note 3, Art. 6.

their emissions requirements in an inexpensive way.⁵⁸ The UNFCCC and Kyoto Protocol repeatedly refer to the primary interest of Southern nations in the “sustainable development” aspects of the climate treaty regime.⁵⁹ While it is beyond the scope of this paper to explore just what “sustainable development” means in this context,⁶⁰ FCOs under the CDM should at least be furthering the social development needs of local populations and contributing to intragenerational and intergenerational equity while preserving the natural environment on which that development depends.⁶¹

The Conference of Parties (“COP”) to the climate accords have specified that flexibility mechanisms, including the CDM, are meant to be “supplemental” to the real domestic reductions in GHG; such domestic actions are meant to comprise a “significant element” in GHG emissions required by the Kyoto Protocol.⁶² What constitutes “supplemental” or “significant” is not specified.

While the CDM was meant to benefit a wide range of Southern nations, more than 80 percent of CDM projects have been directed towards China, India, Mexico and Brazil.⁶³ China has generated about 50 percent of the projects representing 60 percent of the volume of emissions reduction credits between 2002 and 2006 within the CDM.⁶⁴ 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.⁶⁵

The CDM bears little resemblance to its original concept as proposed by Brazil when the Kyoto Protocol was being negotiated. Supported by the

58. Rowlands, *supra* note 5 at 315, 331.

59. UNFCCC, *supra* note 2, Art. 3.5; Kyoto Protocol, *supra* note 2, Art 2.1, Art .10, Art. 12.2.

60. See Daniel Barstow Magraw & Lisa D. Hawke, *Sustainable Development*, in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW 614, *supra* note 5, at 618. Aside from its explicit references in the climate change treaties, “sustainable development” is an emerging customary norm of international environmental law.

61. *Id.*, at 619-620; EDITH BROWN WEISS, IN FAIRNESS TO FUTURE GENERATIONS: INTERNATIONAL LAW, COMMON PATRIMONY, AND INTER-GENERATIONAL EQUITY 3 (1989); Non-legally binding instrument, *supra* note 36, at 104; ATAPATTU, *supra* note 35, at 78.

62. UNFCCC, Report on the Conference of the Parties on Its Seventh Session, Held at Marrakesh From 29 October to 10 November 2001, *Principles, nature and scope of the mechanisms pursuant to Articles 6, 12 and 17 of the Kyoto Protocol*, Decision 15/CP.7, ¶ 8 (Sept. 11, 2001).

63. U.N. Env. Progr. [UNEP] Risoe Centre, *CDM projects by host region* (Oct. 1, 2008), <http://cdmpipeline.org/cdm-projects-region.htm>.

64. *Id.*

65. Carr & Rosembuj, *supra* note 15, at 53.

G-77 nations and China, Brazil had proposed a mechanism that would forecast Northern emissions for the treaty's commitment period. Countries that failed to meet their emissions targets would face a "compulsory contribution" – i.e., a fine – of US\$10 for every one ton over their ceiling, which would go to funding climate change mitigation and adaptation projects in the South. Thus, the fund was envisioned as a "stick" that would compel the North to meet its commitments and would fund "clean development" in the South if the North failed.⁶⁶

Led by the U.S. during Kyoto negotiations, Northern nations instead turned the CDM into a mechanism to provide climate-friendly and profit-generating investment in the South in exchange for the carbon saved to offset the required reductions proposed by the treaty. In other words, rather than a fine that compels compliance, the CDM became a means for the North – and particularly its businesses – to avoid meeting targeted, required GHG reductions.⁶⁷ Unlike most other MEAs, private actors may also participate in generating projects under the CDM by developing, financing, and supervising projects under the CDM.⁶⁸ Private actors can use CDM projects to offset requirements that may have been imposed on them by their governments, or they can profit financially by selling or trading credits to other actors (private or governmental) who must meet emissions reduction targets. Much, if not most of the U.N.-sponsored effort in the past ten years around climate change has gone into making a functional CDM, much to the benefit of business interests around the world. Private actors generated \$US30 billion per year worth of CDM projects in 2006, the first year after the Kyoto Protocol went into effect.⁶⁹ As we shall see here, private actors have further undermined Brazil's original proposal, as they have found multifarious ways to profit from the mechanism while evading real reductions in GHG emissions.

Current Adaptation Efforts

The UNFCCC's Article 2 prioritizes stabilizing GHG concentrations "to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to

66. Jacob Werksman, *The Clean Development Mechanism: Unwrapping the 'Kyoto Surprise.'* 7(2) REV. EURO. COMM & INTN'L ENVTL. L. 147, 151 (1998).

67. *Id.* at 152.

68. Laurence Boisson De Chazournes, *Technical and Financial Assistance*, in THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW 947, *supra* note 5, at 969.

69. UNFCCC, *The 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 Oct. 20, 2008).

proceed in a sustainable manner.”⁷⁰ Article 4.4 specifies that the “developed country Parties and other developed Parties included in Annex II 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.”⁷¹ Article 4.8 names the specific adaptation needs of, *inter alia*, island nations, nations with low-lying coastal areas, nations with areas liable to drought, forest decay, natural disasters and fragile ecosystems.⁷² The Kyoto Protocol 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.”⁷³ This was later set as a kind of tax of 2 percent of all certified emissions reductions (CERs) generated by CDM projects.⁷⁴ The Adaptation Fund of the CDM, operated by the Global Environment Facility,⁷⁵ is expected to bring in \$US80 million to \$US300 million a year between now and 2012.⁷⁶

The money is much needed. Action on adaptation under the UNFCCC/Kyoto Protocol has been slow,⁷⁷ and plans to implement adaptation aid have lagged behind other programs – and, in particular, have lagged behind efforts to implement the CDM, a flexibility mechanism Northern nations have been keen on developing for reasons I elaborate in this article. Eleven years after the Kyoto Protocol was established, and three

70. UNFCCC, *supra* note 1, Art 2.

71. UNFCCC, *supra* note 1, Art 4.4. 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.”

72. UNFCCC, *supra* note 1, Art 4.9.

73. Kyoto Protocol, *supra* note 2, Art. 12.8.

74. UNFCCC, Cooperation & Support, Financial Mechanism, Adaptation Fund, http://unfccc.int/cooperation_and_support/financial_mechanism/items/3659.php (last visited Oct. 20, 2008).

75. UNFCCC, Dialogue on long-term cooperative action to address climate change by enhancing implementation of the Convention, *Report on the analysis of existing and potential investment and financial flows relevant to the development of an effective and appropriate international response to climate change*, Fourth workshop, Vienna, August 27–31, 2007, Dialogue working paper 8 at 6 (2007), http://unfccc.int/files/cooperation_and_support/financial_mechanism/financial_mechanism_gef/application/pdf/dialogue_working_paper_8.pdf.

76. *Id.*

77. 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, Decision-/CP 13, Bali Action Plan (Advance unedited version), http://unfccc.int/files/meetings/cop_13/application/pdf/cop_bali_action.pdf.

years after it has gone into effect, little progress has been made on guidelines for appropriate use of the Adaptation Fund.⁷⁸

Progress on adaptation has also been slow outside the auspices of the formal climate change treaty regime. Contrary to the requirements of CBDR, Northern nations have spent only about \$US40 million a year in voluntary aid to help Southern nations adapt; northern nations have spent about \$US40 *billion* a year helping themselves adapt.⁷⁹ Kevin Watkins, of the United Nations Human Development Report Office, notes that this “borders on the derisory,”⁸⁰ and Archbishop Desmond Tutu has called this “climate change apartheid.”⁸¹

Forest Carbon Offsets (FCOs)

Half of the global terrestrial carbon pool is stored in forests.⁸² Tropical deforestation accounts for 11 percent to 28 percent of GHG emissions.⁸³ Africa alone is losing nearly 10 million acres of forest each year.⁸⁴ The UNDP reports that continued deforestation from Indonesia and Brazil alone equals 80 percent of the GHG emissions savings achieved if all Annex 1 nations were to meet their Kyoto Protocol goals in the 2008-2012 commitment period.⁸⁵

Northern investment in Southern forest preservation and reforestation is rapidly gaining currency both as one scheme to mitigate GHG buildup, and to help some communities and nations adapt to the ravages of global climate change.⁸⁶ In an FCO, a project developer plants trees to reforest a degraded ecosystem, or ensures that a forest that would have otherwise

78. *Id.*

79. Revkin, *Poor*, *supra* note 8.

80. *Id.*

81. UNDP, *supra* note 8, at 166.

82. U.N. Env. Progr. [UNEP], World Conservation Monitoring Centre, *Reducing Emissions From Deforestation: a Key Opportunity for Attaining Multiple Benefits* (Feb. 23, 2007), at 4, available at http://www.unep-wcmc.org/resources/publications/unep_wcmc%20RED%20Feb07.pdf.

83. *Id.*, at 4 cites 18 percent to 25 percent; Figure of 11 percent to 28 percent from UNDP, *supra* note 8, at 41. UNDP also notes that transportation and power generation in the North are bigger contributors to GCC than tropical deforestation.

84. LeMonde, *L'Afrique perd plus de 4 millions d'hectares de forêt chaque année, selon l'ONU*, LEMONDE, June 10, 2008, http://www.lemonde.fr/sciences-et-environnement/portfolio/2008/06/10/deforestation-inquietante-en-afrique_1056434_3244.html.

85. Marcio Santilli, Paulo Moutinho, Stephan Schwartzman, Daniel Nepstad, Lisa Curran, & Carlos Nobre, *Tropical Deforestation and the Kyoto Protocol: a new proposal*, submitted to COP-9, Dec. 1-12, 2003, at 2.

86. E.g., World Bank Carbon Finance Unit, *Bio Carbon Fund*, http://carbonfinance.org/Router.cfm?Page=BioCF&ItemID=9708&FID=9708_

been degraded or felled is, instead, preserved. The developer can then sell the carbon, in the form of CERs now sequestered in the trees and soil, for a contracted period of time. Proponents of FCOs argue that these projects will mitigate GHG accumulation globally, preserve vital ecosystems that help buffer the effects of global climate change and help sustain ecosystem services communities require locally, and also preserve biodiversity and generate ecologically sustainable new forms of wealth to community members living near forested lands.⁸⁷ Preserving forests helps to stabilize local climate fluctuations, prevent drought, protect aquifers, maintain pollinator populations, stabilize soil, buffer communities from natural disasters, allow a source of sustainable forest products, and preserve forest-related options for the future.⁸⁸

FCOs were a prominent topic at the December 2007 COP to the UNFCCC in Bali,⁸⁹ and will likely be expanded as part of the CDM or similar mechanism in the post-2012 successor to the Kyoto Protocol.⁹⁰ Outside the ambit of the UNFCCC/Kyoto Protocol, voluntary markets in carbon offsets are booming, with an array of businesses helping other businesses, individuals, and municipalities to offset their carbon footprints.⁹¹

Current Kyoto Protocol rules allow only 1 percent of carbon credits under the CDM to be allotted for projects in Land Use, Land-Use Change and Forestry (LULUCF).⁹² Projects that prevent deforestation are currently excluded from CDM eligibility, but it is expected they will be a part of the

87. Santilli et al., *supra* note 85, at 5; 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, 191 (2006); UNEP World Conservation Monitoring Centre, *supra* note 82, at 12; Nelson, *supra* note 8, at 615, 622.

88. UNEP World Conservation Monitoring Centre, *supra* note 82, at 9-10; Stefano Pagiola, Natasha Landell-Mills, & Joshua Bishop, *Making Market-based Mechanisms Work for Forests and People* in STEFANO PAGIOLA, JOSHUA BISHOP, & NATASHA LANDELL-MILLS, *SELLING FOREST ENVIRONMENTAL SERVICES: MARKET-BASED MECHANISMS FOR CONSERVATION AND DEVELOPMENT* 224 (London, 2002). Certified Emission Reductions Sale and Purchase Agreement (CERSPA), *Guidance Document* Version 1.0, Apr. 2007, www.cerspa.org; David Freestone, *Foreword* in Streck et al., *supra* note 23, at xii.]]

89. Andrew C. Revkin, *Delegates in Bali for Climate Talks*, N.Y. TIMES, Dec 2, 2007, available at <http://www.nytimes.com/2007/12/02/science/earth/02cnd-bali.html?ex=1197262800&en=cb0edc2c0fce1ee7&ei=5070&emc=eta1>; Peter Gelling, *Forest Loss in Sumatra Becomes a Global Issue*, N.Y. TIMES, Dec. 6, 2007, available at <http://www.nytimes.com/2007/12/06/world/asia/06indo.html?hp>.

90. *Id.*

91. Int'l Inst. for Env. Dev. [IIED] & World Wildlife Fund [WWF], *Climate, Carbon, Conservation and Communities: An IIED/WWF Briefing 2* (2007), available at <http://www.iied.org/pubs/pdf/full/1701IIED.pdf>.

92. Capoor & Ambrosi, *supra* note 47, at 23; Sagemüller, *supra* note 87, at 192.

successor to the Kyoto Protocol.⁹³ However, reforestation projects are currently permitted.⁹⁴ Only one such project has thus far been registered, which I will use as a case study.⁹⁵ Others are in development or await approval.⁹⁶

Many Kyoto Protocol signatories were skeptical about these projects, and therefore circumscribed their inclusion as CDM-eligible.⁹⁷ Skeptics claim that FCOs have problems with *leakage* (communities that formerly relied upon a forest are likely to cut trees elsewhere;⁹⁸ a government may preserve one forest from planned logging and instead offer timber concessions elsewhere; logging companies denied concession rights in one country may instead cut timber in a neighboring country);⁹⁹ *permanence* (forests burn or get chopped down);¹⁰⁰ *quantifiability* (FCOs pose technical challenges of calculating present and future carbon stored in forests, particularly under different climate change scenarios);¹⁰¹ and *additionality* (project developers must show the project would not have been undertaken but for the FCO). When such additionality is false – as it has been shown to be in as many as 20 percent of CDM projects¹⁰² – they result in a net increase in GHG emissions.¹⁰³ Thus FCOs do not mitigate climate change, and may well *increase* GHG emissions.¹⁰⁴

93. UNEP, *supra* note 6.

94. *Id.*

95. IIED & WWF, *supra* note 91, at 2-3.

96. Bruno Locatelli, Lucio Pedroni, & Zenia Salinas, 'Design Issues in Clean Development Mechanism Forestry Projects' in Streck et al., *supra* note 23 at 108.

97. Sagemüller, *supra* note 87, at 192.

98. *Id.*, at 196; Nelson, *supra* note 8, at 645; Ebeling, *supra* note 55, at 50; Cullet & Kameri-Mbote, *supra* note 47, at 98.

99. Ebeling, *supra* note 55, at 51; Cullet & Kameri-Mbote, *supra* note 47, at 111; WORLD BANK CARBON FINANCE UNIT, FOREST CONCEPT PARTNERSHIP FACILITY [FCPF] CONCEPT NOTE 4 (2007), available at http://carbonfinance.org/docs/FCPF_Concept_Note_FINAL.pdf; Gary C. Bryner, *Carbon Markets: Reducing Greenhouse Gas Emissions Through Emissions Trading* 17 TUL. ENVTL. L.J. 267, 291, 296 (2004).

100. PHILIPPE CULLET, DIFFERENTIAL TREATMENT IN INTERNATIONAL ENVIRONMENTAL LAW 124 (2007); Sagemüller, *supra* note 87, at 195; UNEP World Conservation Monitoring Centre, *supra* note 82, at 4-5; Ebeling, *supra* note 55, at 47.

101. Walsh, *supra* note 11; Baumert, *supra* note 17, at 396; Cullet & Kameri-Mbote, *supra* note 47, at 99.

102. Revkin, *Poor*, *supra* note 8.

103. Marisa Meizlish & David Brand, *Developing Forestry Carbon Projects for the Voluntary Carbon Market: A Practical Analysis* in Streck et al., eds., *supra* note 23, at 317; Lohmann, *supra* note 55, at 145; Sebastian M. Scholz & Martina Jung, *Forestry Projects*

But Southern nations have a strong incentive (i.e., cash and technology transfer) to assert that projects were not planned, even if they were; and Northern countries have strong incentive to fund these projects, which are often an inexpensive way of buying the right to pollute more at home and to please domestic private investors.¹⁰⁵ Furthermore, opponents of these projects argue that few financial benefits of such schemes are likely to reach those who live in and around forests, and in fact may be captured by national governments or corrupt, elite, local and national figures.¹⁰⁶ They worry that local communities will lose the livelihoods they derive from forests.¹⁰⁷ However, multiple forces are pushing for expansion of CDM forestry projects, and preparatory workshops and conferences have taken place to prepare the ground for this expansion in the successor to the Kyoto Protocol.¹⁰⁸

Why FCOs are such a big deal now and a bigger deal in future

Some experts forecast that the carbon industry will grow to as much as \$US1trillion a year within a decade, possibly becoming the world's leading commodity market.¹⁰⁹ A multitude of businesses take part in the financial action. Some seek inexpensive ways to offset government-required emissions reductions; some turn those required reductions into profit making as they reduce emissions more than required and are able to sell the remaining credits. The forests of the global South offer an alluring financial and ecological sink: If you can pay poor governments and/or poor people to reforest or not deforest, and you can get credit for the resulting saved carbon credit that you can use to offset your emissions, you can both sell your emissions reduction credits, and continue business as usual in the North. London is the global capital of an industry where asset managers broker

under the Clean Development Mechanism and Joint Implementation: Rules and Regulations in Streck et al., eds., *supra* note 23, at 76-77.

104. Sagemüller, *supra* note 87, at 192.

105. Nelson, *supra* note 8, at 645.

106. Griffiths, *supra* note 23, at 5.

107. *Id.*

108. E.g. U.N. Framework Convention on Climate Change, Subsidiary Body for Scientific and Technological Advice, Twenty-sixth session, May 7-18, 2007, *Report on the second workshop on reducing emissions from deforestation in developing countries*, ¶44, U.N. Doc. FCCC/SBSTA/2007/3 (Apr. 17, 2007); Gelling, *supra* note 89.

109. James Kanter, *In London's Financial World, Carbon Trading is the Next Big Thing*, N.Y. TIMES, July 6, 2007, <http://www.nytimes.com/2007/07/06/business/worldbusiness/06carbon.html>.

these deals and guide other businesses through the tortuous ins and outs of the emerging carbon market.¹¹⁰

While the CDM has circumscribed their eligibility, FCOs are thriving as part of the broader voluntary carbon offset market. As of 2006, more than 30 companies were selling carbon offsets to individuals and companies wishing to offset their carbon footprints.¹¹¹ In 2006, the voluntary market for carbon offsets brought in US\$110 million.¹¹² That figure is expected to grow to US\$40 billion by 2010.¹¹³ Merrill Lynch has just become the first Wall Street firm to invest big time in FCOs, spending \$US9 million to preserve a 1.9 million-acre forest in Sumatra.¹¹⁴ Outside the bounds of formal regulation, a host of MNEs, NGOs, and IFIs are investing in these FCOs, with potential to wield powerful influence on how human and ecological communities are configured in distant lands. They are deriving their own codes of conduct for how they will proceed. I shall trace the various actors who stand to profit and lose from this voluntary FCO market, and shall explain the implications of this market for mitigating global climate change and for regulating (or not) how MNEs respond to the crisis of global climate change.

Case Studies

Introduction

In China, the Guangxi Watershed Management FCO employs rural villagers to reforest nearly 10,000 acres of degraded land.¹¹⁵ Guangxi is the first land use project approved by the CDM. The project is small, but is seen as a “testing ground” where participants are “learning by doing.”¹¹⁶ Specifically, project investors are testing the technical challenges to achieving “credible carbon sequestration” while “pilot[ing] the viability of enhancing the livelihoods of people and natural environment.”¹¹⁷ The plantations are described in the Project Design Document (PDD) as a

110. *Id.*

111. TREXLER CLIMATE & ENERGY SERVICES, A CONSUMER’S GUIDE TO RETAIL CARBON OFFSET PROVIDERS at iii (2006), <http://www.cleanair-coolplanet.org/ConsumersGuideToCarbonOffsets.pdf>.

112. Stephen Faris, *The Other Side of Carbon Trading*, FORTUNE, Aug. 30, 2007.

113. *Id.*

114. Marc Gunther, *Merrill Lynch’s Carbon Bet*, MONEY, April 18, 2008, http://money.cnn.com/2008/04/17/technology/carbon_farming.fortune/?postversion=2008041808

115. PDD Guangxi, *supra* note 55, at 21, 72, 77, 101.

116. *Id.* at 39.

117. *Id.* at 2.

“virtual cash crop” for the local people who will profit both from harvesting the trees at the end of the commitment period and from selling the carbon credits.¹¹⁸ The PDD also cites the ecosystem services benefits the project provides – preserving not just carbon, but also soil, water, and biodiversity.¹¹⁹

In this project, the actors are: a) a private forestry firm, Guangxi Huanjiang Xinghuan Forestry Development Company Ltd., which will acquire (and can then sell) the emissions reduction credits of the project; b) the World Bank; c) the governments of Spain, Italy, and China; d) the Global Environment Facility (GEF); and e) TÜV SÜD, an MNE that verifies CDM eligibility.

In the Tanzanian CDM proposal (which I shall abbreviate “Unchindle” or “Tanzania”), project developers seek to reforest about 18,000 hectares of currently “degraded” rural land.¹²⁰ While this scheme is ostensibly about storing carbon, mitigating global climate change, re-establishing forests, and improving Southern rural livelihoods, it also generates profits for numerous private corporations. The MNE actors here are: 1) Green Resources, Ltd., a Norwegian/Tanzanian tree products company; 2) Industrikraft Midt-Norge, a Norwegian energy company and/or other potential carbon purchasers; 3) again, TÜV SÜD, the CDM project verifier; and 4) SGS, a global standards and verification firm that advises the project developers.

World Bank

The Xinghuan Forestry Development Company Ltd. will sell as many as 500,000 temporary Certified Emissions Reductions (tCERs) per year to the World Bank for fifteen years.¹²¹ They are “temporary” because they expire in 15 years, after which the project participants can renegotiate another lease, or the Chinese landholders may do what they wish with their trees, including cut them down, thus potentially releasing the saved carbon.¹²² One criticism of FCOs is that the carbon savings are not permanent: The credits issued are in contracts with terms that expire, and forests have an unfortunate

118. *Id.* (in quotes in the original).

119. *Id.*

120. PDD Uchindile, *supra* note 55, at 3-4.

121. Letter of Approval for Project of Facilitating Reforestation for Guangxi Watershed Management in Pearl River Basin As a Clean Development Mechanism Project by National Development and Reform Commission of the People’s Republic of China (May 15, 2006), available at <http://cdm.unfccc.int/UserManagement/FileStorage/7Y41M57708ZDR95GDFS8LGOZLPC7ZL>.

122. Christopher Carr & Flavia Rosembuj, *World Bank experiences in contracting for emission reductions*, 2 ENV. LIABILITY 114, 117 (2007).

tendency to burn down even while on contract to accumulate carbon. The World Bank is buying the tCERs in order to make the project financially viable and buffer Northern investors from investment risk.¹²³

The World Bank promotes forest carbon offset projects with great vigor.¹²⁴ Through its Prototype Carbon Fund established in 1999, the Bank pioneered a system whereby Northern investors – private businesses and governments – could offset their carbon emissions through investments in various Southern projects.¹²⁵ The carbon offsets from each Bank venture are distributed proportionately to the various entities, which in turn could use them to offset carbon reduction requirements.¹²⁶ That is to say, the Bank facilitates continued use of GHG-producing fossil fuels by facilitating the purchase of cheap carbon offsets in the developing world. The Bank's recently developed Carbon Finance Unit continues this work by eliciting funds from Northern nations (in the Guangxi project, Spain and Italy) that the Bank uses to buy emissions reduction credits in Southern nations.¹²⁷

The World Bank has launched a Forest Carbon Partnership Facility (FCPF) to facilitate FCOs.¹²⁸ The Bank portrays the schemes as a way to halt tropical deforestation, while helping Southern nations to capture their "potential share in the multi-billion dollar global carbon market,"¹²⁹ receive appropriate technology¹³⁰ and alleviate poverty.¹³¹ World Bank promotional material for their BioCarbon Fund touts the contributions to sustainable development, including new sources of employment, new sources of revenue from forest products and selling carbon credits, and new technical

123. *Id.*, 117-18.

124. E.g., Chomitz et al., *supra* note 8, at 4.

125. Carr & Rosembuj, *supra* note 15, at 53.

126. *Id.*

127. World Bank Carbon Finance Unit, About World Bank Carbon Finance Unit, <http://carbonfinance.org/Router.cfm?Page=About&ItemID=1> (last visited Oct. 20, 2008).

128. Press release, The World Bank, Two New World Bank Carbon Facilities Will Help Fight Climate Change and Deforestation (Oct. 11, 2007), http://carbonfinance.org/docs/Two_New_World_Bank_Carbon_Facilities_Will_Help_Fight_Climate_Change_And_Deforestation.pdf

129. Capoor & Ambrosi, *supra* note 47, at 4.

130. Benoit Bosquet, *The BioCarbon Fund: Using the Global Market to Restore Ecosystems: New Opportunity for Public-Private Partnerships*, Powerpoint Presentation, "Enhancing the Benefits to Communities From Extractive Industry Projects," Int'l Fin. Corp [IFC] Conference June 16 2006, available at <http://www.ifc.org/ifcext/commdev.nsf/Content/Enhancing-Presentations-Session5>.

131. FCPF *Concept Note*, *supra* note 99, at 4.

capacity building in forestry.¹³² The Bank's supporters cite this work as contributing to "its mission of global public service."¹³³

This Guangxi project is aimed not just at building local capacity, but testing a program of small-scale forestry projects, which will seed the ground for a "much larger system of positive incentives and financing flows in the future."¹³⁴ The FCPF is part of the World Bank's heavy investment in carbon financing; the Bank now manages ten carbon funds worth \$US2 billion with 16 governments and 64 private companies contributing.¹³⁵ The Bank represented both buyers (Northern nations and industrial entities) and sellers (Southern governments and communities) of these FCOs.¹³⁶

Through the Bank's participation, wealthy purchasers of carbon credits are buffered from investment risk. The Bank assumes the risk that, for example, the CDM's EB will not approve a project. Once the project has been approved, the seller (i.e., the Southern entity) bears the risk of not delivering on the promised carbon. In an FCO, if they do not plant trees at the rate promised or if a forest burns down, then they do not receive the payment for the promised sequestered carbon.¹³⁷ The Northern investors have little to lose from these deals, and much to gain as they are allowed to continue to pollute. The Bank's guarantees to investors "triggered the massive inflow of private money into the CDM."¹³⁸

Moreover, the Bank's clients are bundling profit-making from carbon trading with other forest-based or similar investments in Southern communities. A World Bank Report notes that

[T]he 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

132. World Bank Carbon Finance Unit, *Environmental and Social Benefits in the BioCarbon Fund* (May 15, 2004), <http://carbonfinance.org/Router.cfm?Page=BioCF&FID=9708&ItemID=9708&ft=DocLib&CatalogID=7031>.

133. Karen DeGouve, *Negotiating a Fair Price for CERs*, in EQUAL EXCHANGE, *supra* note 11 at 123.

134. World Bank Finance Unit, *About Forest Carbon Partnership Facility* (FCPF), <http://carbonfinance.org/Router.cfm?Page=FCPF&FID=34267&ItemID=34267&ft>About> (last visited Oct. 20, 2008).

135. FCPF *Concept Note*, *supra* note 99, at 4-5.

136. *Id.* at 6.

137. Carr & Rosenbuj (2007), *supra* note 122, at 118.

138. DeGouve, *supra* note 133.

carbon becomes just one of the many assets from which investors seek to correctly value and grow.¹³⁹

A World Resources Institute Report points out the lack of coherence in World Bank climate change policy. The Bank seldom includes advice on global climate change in its Country Assistance Strategies;¹⁴⁰ it seldom considers climate change impacts in its energy sector lending.¹⁴¹ An NGO's audit of World Bank energy policies found that between 1992 and 2004, 82 percent of all energy projects financed by the Bank shunted fossil fuels from South to North, and that these projects, worth over \$US10.7 billion, overwhelmingly benefited Northern fossil fuel MNEs, of which Halliburton was involved as developer, contractor, or investor in \$US2.5 billion worth of these projects.¹⁴² Whatever laudatory intentions it proclaims, it is difficult to see how Bank policies promoting FCOs will fail to offer disproportionate benefit the wealthy Northern investors that contribute to its carbon funds, or how the Bank will successfully offset more than a fraction of GHG emissions that its other projects cause.

One might be more sanguine about the Bank's carbon investments if they were simultaneously generating adaptation benefits for poor communities in the global South. However, that is not necessarily the case. About 7 percent of the Bank's carbon portfolio lies in the Community Development Carbon Fund ("CDCF").¹⁴³ According to that Fund's website, "[t]he 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."¹⁴⁴ That is to say, this Fund "differentiates" 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

139. Capoor & Ambrosi, *supra* note 47, at 25.

140. Jon Sohn, Smita Nakhoda, & Kevin Baumert, *Mainstreaming Climate Change Considerations at the Multilateral Development Banks*, WORLD RESOURCE INSTITUTE ISSUE BRIEF 5 (July 2005).

141. *Id.* at 6

142. Jim Vallette & Steve Kretzmann, *The Energy Tug of War: The Winners and Losers of World Bank Fossil Fuel Finance*. Institute for Policy Studies Sustainable Energy & Economy Network (2004), at 2.

143. World Bank Carbon Finance Unit, About Community Development Carbon Fund (CDCF), <http://carbonfinance.org/Router.cfm?Page=CDCF&ft=About>.

144. *Id.*

emissions and mitigate climate change.”¹⁴⁵ The Chinese project – like 93 percent of all World Bank carbon projects – does not fall under the CDCF’s aegis, and thus need not focus on these factors.

The Governments of Spain, Italy, and Norway

Spain and Italy are financing the Guangxi deal,¹⁴⁶ and Norway is allowing new domestic polluting energy generation in exchange for promises from a developer to offset its carbon in Tanzania.¹⁴⁷ As pilot projects, these FCOs offer cheap ways to offset required emissions reductions under the Kyoto Protocol and its successors. Norway has recently announced it plans to be “carbon neutral” by 2030, partly through investing huge funds in forest projects in developing nations.¹⁴⁸ At the same time, the nations can help fulfill their commitments to the E.U.’s target that member states should be contributing 0.7 percent of GDP to Overseas Development Assistance by 2015.¹⁴⁹

Cutting GHG emissions sounds good to eco-minded citizens . . . until we face the reality of what that might actually mean to our day-to-day lives (e.g., higher taxes and fuel costs, curbs on where we can drive and when, product bans). It is natural that elected officials, once they get the good press that comes from being eco-friendly, will subsequently look for ways to cushion the blows required GHG emissions may rain on their citizens and their own political prospects.

Furthermore, as we can see in the World Bank’s promotional materials, MNEs in Northern nations stand to profit not just through carbon offset trading but through associated business ventures. Northern national political leaders may thus be under strong pressure to help their MNEs find “low hanging fruit” that allows them to offset required carbon reductions in the cheapest way possible while finding new and novel ways to reap other profits from the scheme.

China and the Global Environment Facility

Southern nations hope to attract Northern state and MNE technology and funds through FCOs. The World Bank’s partner in helping Southern nations comply with their obligations under Multilateral Environmental

145. *Id.*

146. PDD Guangxi, *supra* note 55, at 4, 87, 88.

147. Harald Eraker, CO2LONIALISM: NORWEGIAN TREE PLANTATIONS, CARBON CREDITS AND LAND CONFLICTS IN UGANDA 5, 21 (NorWatch 2000).

148. Rosenthal, *supra* note 53.

149. De Chazournes, *supra* note 68, at 951. Of course, Norway is not a member of the E.U.

Agreements (MEAs) is the Global Environment Facility (GEF). The World Bank is trustee of the GEF; it administers the GEF in cooperation with the UNDP and U.N. Environment Programme (UNEP).¹⁵⁰

While the World Bank facilitates and funds the FCOs for this CDM project, China is also using GEF funding “provided for the overall umbrella project” of a nature reserve of which this reforestation effort is apparently a small part.¹⁵¹ Those industrial entities who stand to benefit financially from these FCOs, and who the World Bank would be helping, include profit-making timber companies.¹⁵² The World Bank notes that “[p]rivate enterprises (e.g., logging companies or farms) could be directly involved in the programs and measures designed to curb deforestation and degradation.”¹⁵³ NGOs protesting this scheme allege that it is “perverse” that the World Bank’s policies that are ostensibly “pro-poor” would reward industrial loggers who have traditionally contributed both to ecological destruction and local impoverishment.¹⁵⁴ The Guangxi validation report expresses a concern about “diversion of official development assistance” to this project that potentially benefits private interests; i.e., the private logging concern that is the project developer.¹⁵⁵ The entire response from the project proponents, which apparently satisfied the verifiers, is that “[t]he GEF fund will support the nature reserve management which is separated and outside from this CDM project.”¹⁵⁶

Nonetheless, it is difficult to avoid suspecting that China is leveraging GEF and World Bank funds in support of a private timber concession. The Chinese project participant listed on the Project Design and other

150. GLOBAL ENVIRONMENT FACILITY, INSTRUMENT FOR THE ESTABLISHMENT OF THE RESTRUCTURED GLOBAL ENVIRONMENTAL FACILITY 7 (2004), http://thegef.org/GEF_Instrument3.pdf.

151. World Bank, *Validation of the “Facilitating Reforestation for Guangxi Watershed Management in Pearl River Basin” Project in China 15* (Validation Report No. 756176, Revision 02, 2006), <http://cdm.unfccc.int/UserManagement/FileStorage/OS519UDXM1J84BWHKM36KMY70638G> [hereinafter Validation Report].

152. FCPF *Concept Note*, *supra* note 99, at 11.

153. *Id.*

154. Letter from Stuard Wilson, Forest Monitor, Patrick Alley, Global Witness, Susanne Breikopf, Greenpeace International & Simon Counsell, Rainforest Foundation UK, to Benoit Bosquet, Sr. Natural Resources Management Specialist, Carbon Finance Unit, World Bank (Sept. 7, 2007), www.bicusa.org/proxy/Document.10542.aspx.

155. Validation Report, *supra* note 151, at 15.

156. *Id.*

documents is the “Xinghuan Forestry Development Company Ltd,”¹⁵⁷ who will be employing local villagers to do the forestry work and sharing the profits with them. Note that none of the project documents reveal any more about them; China’s Letter of Approval for the CDM project only authorizes Xinghuan Forestry Development Company Ltd. to carry out the project.¹⁵⁸ The few hits I received from Google were all in Chinese, making it difficult for non-Chinese based NGOs to monitor or comment on how private sources are profiting from the FCO.

FCOs, MNEs, and the Problem of Environmental Democracy

To date, FCOs, as part of the CDM or the voluntary market, are opaque and impenetrable for citizens, NGOs, regulators, or lawyers wishing to comment on, improve, or monitor the deals.

To be validated as a CDM project, public comments must be taken into account.¹⁵⁹ The Validation Report for the Guangxi project notes that “The PDD has been made public by February 16, 2006 until April 1, 2006. No stakeholder comments have been received.”¹⁶⁰ If relevant stakeholders are local citizens that might be affected by the project, would they know that the project was open for comment? Would they have access to computers? Would they have the political freedom to publicly oppose such a project? Would they have the slightest concept of what the project was about? While stakeholder comments are incorporated within the PDD,¹⁶¹ it is hard to believe that rural people in China (or anywhere) understand carbon banking well enough to participate meaningfully in their development.¹⁶²

157. Facilitating Reforestation for Guangxi Watershed Management in Pearl River Basin: CDM Project Activity Registration and Validation Report Form, July 25, 2006, at 1, <http://cdm.unfccc.int/UserManagement/FileStorage/L8UGEOV2FSX6D7BMUPUONPP6JCYVV>.

158. Letter of Approval for Project of Facilitating Reforestation for Guangxi Watershed Management in Pearl River Basin As a Clean Development Mechanism Project by National Development and Reform Commission of the People’s Republic of China, May 15, 2006, available at <http://cdm.unfccc.int/UserManagement/FileStorage/7Y41M57708ZDR95GDFS8LGOZLPC7ZL>.

159. Jason Schwartz, “‘Whose Woods These Are I Think I Know’: How Kyoto May Change Who Controls Biodiversity” 24 *NYU Env. L. J.* 421, 470 (2006).

160. Validation Report, *supra* note 151, at 28.

161. PDD Guangxi, *supra* note 55, at 81-84.

162. One director of an NGO seeking to monitor FCOs told me that many rural people with whom she has spoken believe that these FCOs are a kind of charity; they have no understanding of carbon trading, and no understanding that when they sign certain documents they might be responsible for monetary losses should the forests burn or fail to thrive.

NGOs or individual concerned citizens could also make comments, if they were aware of these projects existing, and if they could understand the Byzantine ways of the CDM. I have been able to find no proposed FCO projects on the CDM's website, even though several that propose to use the Climate, Community, & Biodiversity Alliance's (CCBA) standards are available on the CCBA's website;¹⁶³ thus you would have to know that a project is using these voluntary standards in order to know where to look to find the Project Design Document! The calculus equations¹⁶⁴ of the PDD that estimate carbon storage, abstruse terminology, and forests of acronyms all add to the opacity.

As noted above, Environmental Democracy is an emerging environmental human rights norm. As such, citizen watchdog groups should be able to ensure that nations are fulfilling their emissions pledges. The public – particularly those who are likely to be affected by a CDM forestry scheme – should be able to review and comment before any trading scheme is implemented, and should be able to prevent unjust trading schemes. In fact, in an ideal environmental democracy, citizens whose forests are to be preserved should propose, manage, and benefit from these offsets. In fact, many current FCOs are imposed on local communities by governments or are initiated between private actors and local elites.¹⁶⁵ Stakeholder participation is often minimal in CDM project verification.¹⁶⁶ Even in progressive voluntary codes that do develop criteria for environmental democracy, such as the CCBA's, citizens could not necessarily scuttle a project, and certainly no standards require that local citizens actually propose, manage, and/or own the projects. Whether under the CDM or the voluntary market, citizen participation is expensive, and anything that adds cost to the process lowers the profit to be made by Northern project developers and traders.¹⁶⁷ Under the CDM, no Environmental Impact Assessments are required.¹⁶⁸ Third parties may challenge CDM projects if

163. The Climate, Community & Biodiversity Alliance [CCBA], CCB Projects, <http://www.climate-standards.org/projects/index.html> (last visited Oct. 20, 2008). I return to CCBA below.

164. E.g., PDD Guangxi, *supra* note 55, at 62.

165. Griffiths, *supra* note 23, at 5.

166. *Id.* at 58; Climate Action Network, *Public Participation in the CDM and JI: Climate Action Network (CAN) Recommendations*, July 2001, <http://www.climatenetwork.org/climate-change-basics/cop-9docs/CAN-pubpartrec.pdf>.

167. *Id.*

168. *Id.* The UNFCCC, *supra* note 1, 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

they suspect, for example, that the projects don't meet "additionality" requirements, assuming they can find any meaningful data about what is being offset and whether or not the project would have happened anyway without CDM assistance.¹⁶⁹ Individual nations, through domestic environmental laws, could allow their citizens to weigh in on how emissions offsets will work in their nations; but this is not the prevalent scheme in the South generally and in current FCO schemes in particular.¹⁷⁰ Certainly, citizens everywhere have little say in how emissions targets are set or what kinds of offsets or trading are permitted between nations.

I thus believe the many current CDM and voluntary schemes violate the emerging international environmental law principle for full participation by all concerned citizens in environmental decision making, and violate the fundamental human rights to participate and to access information about matters that affect other fundamental rights. While private actors may not be directly liable for customary international environmental law principles,¹⁷¹ host nations are required to protect their citizens from human rights violations of private actors acting in their territory and home states are required to monitor human rights violations committed by private actors operating from their states.¹⁷²

FCOs and CBDR

As discussed above, Northern nations are legally obliged under the UNFCCC/Kyoto Protocol and under customary international environmental law to fund mitigation and adaptation strategies in the South that will help avoid human rights and ecological cataclysms that result from the North's responsibility for creating global climate change.

FCO projects that respect CBDR and genuinely mitigate Northern emissions while helping the South adapt to global climate change would help fulfill this obligation; but projects that allow Northern actors to evade

mitigate or adapt to climate change" Art 4(1)(f). This language is convoluted and vague, and it does not require EIAs of individual projects.

169. Or assuming they can actually find the PDD. As I note below, PDDs for proposed CDM FCO projects are unavailable on the UNFCCC's website; Kenneth Berlin, *Arresting Climate Change*. SL098 ALI-ABA 79, 87 (2006).

170. Griffiths, *supra* note 23, at 12, 14.

171. Muchlinski, *supra* note 18, at 572.

172. Human Rights Committee, *General Comment No. 31, The Nature of the General Legal Obligation Imposed on States Parties to the Covenant on Civil and Political Rights*, U.N. Doc. CCPR/C/21/Rev. 1/Add.13 (May 26, 1004); Committee on Economic, Social and Cultural Rights, *General Comment No. 3, The Nature of States Parties Obligations*, U.N. Doc. E/1991/23 (Dec. 14, 1990); JANET DINE, *COMPANIES, INTERNATIONAL TRADE AND HUMAN RIGHTS* 179-181 (Cambridge, 2005).

their legal responsibility to reduce their own emissions, and that further undercut the South's ability to adapt, violate the equity-enhancing underpinnings of CBDR.

Even if they never explicitly cite the legal requirements of CBDR, the managers of the World Bank's various Carbon Funds acknowledge the obligation that better-off States and private interests have to help the poor. But in Guangxi, international funds provided by state and corporate actors benefit private timber financial interests who are likely to profit disproportionately from the CERs generated (as compared to members of the communities whose land is used for the plantations and whose labor may be compensated as forest laborers). The Carbon Funds help Northern entities avoid reducing GHG emissions, and thus continue to profit from their polluting industrial activities. In both China and Tanzania, to the extent that sustainable development may occur, it seems ancillary, and such goals are certainly not transparent or verifiable. In the decade since the Kyoto Protocol was signed, rather than the rich helping the poor under the legal mandate of the CBDR principle, the rich have exploited the climate change legal regime to accrue wealth at the expense of the poor, as we shall now see.

Turning Carbon into Cash

At the Bali UNFCCC COP, Northern nations, pressed by their private businesses, pushed hard for deals to extend the amount and kinds of FCOs allowed under the Kyoto Protocol and its successor.¹⁷³ Adam Nathan, communications director of the Carbon Markets Association, asserted that "[n]egotiations in Bali cannot afford to fail," as Kyoto nations are earning billions of dollars of carbon credits under the current flexibility mechanisms. For example, the E.U. gave away – free of charge – emissions trading credits to over 11,000 companies, who thus received free assets – rather than penalties or reduction mandates – for their polluting activities.¹⁷⁴ A list of the NGOs accredited to participate at UNFCCC conferences reveals a huge array of business and trade organizations; these meetings resemble trade conventions as much as they do environmental meetings.¹⁷⁵

Much FCO financing comes from private investors, who do not see themselves as bound by Kyoto Protocol Article 10's requirement that parties take local sustainable development priorities into account,¹⁷⁶ whose required adherence to CBDR is questionable, and who stand to make

173. Revkin, *Bali*, *supra* note 84.

174. *Id.*

175. UNFCCC, Parties & Observers, Civil Society, Admitted NGO, <http://maindb.unfccc.int/public/ngo.pl> (last visited Oct. 20, 2008).

176. Nelson, *supra* note 8, at 636.

considerable money from FCO schemes.¹⁷⁷ The regulatory complexity of FCOs allows Northern parties to push for speed and ease over careful attention to human rights norms, and makes it unlikely that Southern parties will have the institutional capacity to negotiate adequately or enforce human rights norms.¹⁷⁸

Next I will turn to some of the private investors who profit from the new commodity called carbon.

Project Developers

The Uchindile project is proposed by Green Resources, Ltd., a Norwegian company that has purchased the land in Tanzania and will own the CERs resulting from the reforestation project.¹⁷⁹ Green Resources is a for-profit company that employs 1500 people and holds more than 100,000 hectares of land in East Africa.¹⁸⁰ Green Resources touts its mission “to fight climate change through highly efficient afforestation¹⁸¹ projects that at the same time benefit the poorest people in the world.”¹⁸² Green Resources aims to be Africa’s “leading provider of carbon offsets.”¹⁸³

Green Resources is the new name of another Norwegian company, TreeFarms.¹⁸⁴ Green Resources in turn possesses another subsidiary, Sao Hill Industries, which “aims to be the leading forest products, building material and transmission pole company in Eastern Africa.”¹⁸⁵ In this case, the raw material is trees, and sequestered carbon is among the many “forest

177. Revkin, *Bali*, *supra* note 84.

178. Baumert, *supra* note 17, at 396.

179. PDD Uchindile *supra* note 55, at 100, 129; Lohmann, *supra* note 55, at 242.

180. Green Resources: Company Strength, <http://www.greenresources.no/Company/Strength/tabid/95/Default.aspx> (last visited Oct. 20, 2008).

181. In FCO language, afforestation is “The direct human-induced conversion of land that has not been forested for a period of at least 50 years to forested land through planting, seeding and/or the human-induced promotion of natural seed sources.” UNEP CDM *Legal Guide*, *supra* note 8, at 7.

182. *Id.*

183. *Id.*

184. GREEN RESOURCES, SUMMARY OF THE MANAGEMENT PLAN FOR UCHINDILE FOREST PROJECT (2007), <http://www.greenresources.no/Portals/0/MP%20Summary%20for%20UFP.pdf>. While the two businesses are listed separately on that PDD, Tree Farms now seems to have changed its name to Green Resources, merging the two businesses. *See* Green Resources: Green Resources’ Shares, <http://www.greenresources.no/Company/Shares/tabid/90/Default.aspx> (last visited Oct. 20, 2008).

185. Green Resources: Business Strategies, <http://www.greenresources.no/Company/BusinessStrategies/tabid/88/Default.aspx> (last visited Oct. 20, 2008).

products” it sells. If approved, the CDM of the Kyoto Protocol would help Green Resources sell validated carbon; i.e., a new “forest product.”

As TreeFarms has purchased land across East Africa, it has sought to reshape human and ecological communities in order to earn profits for itself and its investors. TreeFarms has been implicated in schemes that severely undercut the ability of already poor people to make a basic living. In Uganda, TreeFarms plantations – on land purchased for low prices from the government – fomented widespread eviction and social unrest.¹⁸⁶ Of course, from the project documents, it is difficult to determine who would be liable should human rights violations occur, or should the carbon allegedly sequestered not materialize or be destroyed through fire or vandalism. We know that Green Resources is related to TreeFarms only because they are both listed on the PDD. Only a parenthetical phrase on Green Resources’ website mentions the connection.¹⁸⁷

Janet Dine argues that “property” is not rights over *things* but rights over people; She urges us to believe that the greater the power conferred to the owner of that property right, the greater the responsibilities that the property “owner” undertakes.¹⁸⁸ Dine writes: “Of course, where the relevant item is food or water, the freedom and liberty inherent in exercise of property rights becomes a death warrant of those whose access to the item is thereby restricted.”¹⁸⁹ In Uganda, people were thrown off their land and disconnected from their only source of food.¹⁹⁰ In Tanzania, while TreeFarms had promised steady employment to replace traditional grazing land, they were only hiring local people to plant between December and March, and were paying less than \$US1 a day.¹⁹¹ Because land tenure was traditional and not formal (i.e., no property deeds conferring a Northern notion of property ownership), it is estimated that the villagers have lost more than 30 percent of their grazing and cropland, and some have not been compensated for this loss.¹⁹² The PDD does report some of the uncharitable things local villagers have to say about Green Resources,¹⁹³ and reports from a survey that 41 percent of locals said wages were low or paid late, and 38 percent

186. Lohmann, *supra* note 55, at 238-240.

187. Green Resources’ Shares, *supra* note 180.

188. DINE, *supra* note 172, at 172.

189. *Id.*

190. Lohmann, *supra* note 55, at 237-46.

191. Lohmann, *supra* note 55, at 242. Lohmann discusses in some detail multiple examples of FCOs that have disinvested local citizens of land and livelihood.

192. PDD Uchindile, *supra* note 55, at 84.

193. *Id.* at 94-95.

said the company had not fulfilled promises it made when it acquired local land.¹⁹⁴

In Tanzania, TreeFarms leased its land from the government at \$US1.90 a year for 99 years.¹⁹⁵ For the \$US565,000 it will pay to Tanzania over 25 years, the company stands to make around \$US27 million by selling carbon offsets.¹⁹⁶ It may be that Tanzania is part of a “race to the bottom” to become a new kind of “pollution haven,”¹⁹⁷ allowing the North to continue to pollute the global atmospheric commons through cheap offsets that provide desperately needed FDI. At any rate, this Northern company stands to benefit handsomely from carbon, and the benefits to local Tanzanians seem small.

Northern Industries/Offset Purchasers

In addition to the value of forest products it would gain once any carbon offset contracts were completed, TreeFarms signed an options contract for \$US4.50 per tonne of carbon with Industrikraft Midt-Norge, a Norwegian power company.¹⁹⁸ Why would Industrikraft Midt-Norge have wished to purchase this carbon to be sequestered from reforestation at a remote location in Tanzania? The company sought to build two large gas-fired power plants in Norway, which alone would have increased Norway’s GHG emissions 29 percent, and of course would have generated large profits for the company.¹⁹⁹ The corporation convinced various players in the Norwegian government that they could offset new GHG emissions through saving carbon cheaply in the South, such as through TreeFarms’ FCOs.²⁰⁰ Due in part to negative publicity about TreeFarms’ Uganda project,²⁰¹ Industrikraft Midt-Norge seems to have withdrawn from purchasing these particular FCOs; but the company’s website does assert that it will “implement measures to compensate for its own CO2 emissions” within the Kyoto Protocol framework, i.e., it will buy other CERs from other projects,

194. *Id.* at 94.

195. Lohmann, *supra* note 55, at 242.

196. *Id.*

197. Muchlinski, *supra* note 18, at 543.

198. Lohmann, *supra* note 55, at 242.

199. Jorn Stave, Carbon Upsets: Norwegian “Carbon Plantations” in Tanzania, at 7, NorWatch, (July 2000), <http://www.norwatch.no/download-document/15-caron-upsets-norwegian-carbon-plantations-in-tanzania.html>.

200. Erasker, *supra* note 147.

201. *E.g.* Lohmann, *supra* note 55, at 239-245.

thus guaranteeing continued pollution through perpetuation of the unsustainable fossil fuel economy of the North.²⁰²

Other offset purchasers in the “voluntary market” include other industries looking for inexpensive ways to meet government-imposed emissions reductions targets, businesses looking to gain positive publicity by investing in high-profile carbon storage projects, and consumers looking to offset their carbon-intensive lifestyles.²⁰³

Carbon Funds

Business is also booming for full-service carbon brokers, financial institutions, and lawyers. As of 2006, 50 different carbon funds were buying and selling CERs, either to entities who required reductions to meet GHG reduction targets, or to speculators for whom “the CDM is seen as a financial opportunity, similar to those in other commodity markets.”²⁰⁴ For example, London-based Climate Change Capital “advises and invests in companies who recognise that combating global warming is both a necessity and an economic opportunity. Its activities, which also include investment management and financing emissions reductions, aim to make the world’s environment cleaner while delivering attractive financial returns.”²⁰⁵ Traditional investment firms are getting into the carbon commodity business. For example, Merrill Lynch, in association with Australian business Carbon Conservation, has just announced that it is financing a high-profile, \$US9-million deal to prevent deforestation on nearly 2 million acres in Aceh, Sumatra.²⁰⁶ Merrill Lynch hopes to sell the carbon credits (for which they’re paying \$US4 each) at a profit, and Carbon Conservation hopes to “become the amazon.com of the Amazon.”²⁰⁷

A carbon fund may well buy, and then resell, Green Resources’ CERs. From the seeds planted in Tanzanian pasture sprouts storage units for

202. Industrikraft Midt-Norge: Owners, <http://www.industrikraft.no/english/index.html> (last visited Sept. 26, 2008).

203. Kanter, *supra* note 109; Katherine Hamilton, Ricardo Bayon, & Amanda Hawn, ‘Carving a Niche for Forests in the Voluntary Carbon Markets’ in Streck et al., *supra* note 23 at 293; Clean Air – Cool Planet, A CONSUMER’S GUIDE TO RETAIL CARBON OFFSET PROVIDERS (2006) at iii, available at <http://www.cleanair-coolplanet.org/ConsumersGuidetoCarbonOffsets.pdf>.

204. Mark Meyrick, *What is a Fair Price for CDM Credits?*, in EQUAL EXCHANGE, *supra* note 11, at 102-03.

205. Careers, Climate Change Capital, <http://www.climatechange-capital.com/pages/jobdetail.asp?id=533&> (last visited Oct. 20, 2008).

206. Gunther, *supra* note 114.

207. *Id.*

carbon, a new commodity that can be repeatedly bought and sold for a profit in international markets.

Law Firms

Many corporate law firms are positioning themselves as advisors to governments and “deep pocket” investors who are looking to understand, and profit from the CDM and voluntary carbon markets.²⁰⁸ For example, Clifford Chance will “advise on climate change issues. . . to help in future-proofing your business and maximizing opportunities;”²⁰⁹ The PDD does not reveal who has been advising TreeFarms, but it is a good bet they have carbon lawyers on retainer.

Designated Operational Entities, Standards Certifiers, and Consultants

The FCO system benefits another class of private enterprises that verify technical standards in projects or consult with project developers to help them navigate the abstruse technical and legal requirements.

An Executive Board (“EB”) accredits proposed projects under the CDM.²¹⁰ The CDM EB is underfunded and overburdened with duties, and thus contracts out verification and certification to private firms known as Designated Operational Entities (DOEs); i.e., private companies who are market actors.²¹¹ NGOs sometimes allege that global accounting and standards firms are “captured” by their clients.²¹² Such enforcement “can take place in a club-like atmosphere of repeat players with a stake in maintaining their reputation within an industry.”²¹³ Carbon verifiers or consultants may act as a DOE for a given project, but be a project broker, certifier, or consultant for different carbon offset projects; thus DOEs who wish to be hired in the future have a strong incentive to verify proposed CDM projects to maintain collegial relationships with prospective employers.

TÜV SÜD, based in Germany but with offices at 130 sites worldwide, is the DOE for both the China and Tanzania projects. It has 10,000 employees

210. Benedict Kingsbury, *Environmental Governance As Administration*, in THE OXFORD HANDBOOK OF ENVIRONMENTAL LAW 63, *supra* note 5, at 75.

211. *Id.* at 76; Silveira da Rocha Sampaio, *Seeing the Forest for the Treaties: Evolving Debates on CDM Forest and Forestry Project Activities 10 Years After the Kyoto Protocol* 144, 147 (Pace U. Sch. Of Law, Working Paper Series 2007), available at <http://ssrn.com/abstract=1011187>.

212. Ratner, *supra* note 20, at 823.

213. *Id.* at 824.

and earned more than \$US1 billion in 2005.²¹⁴ It is both a DOE verifier and a project broker, having worked on over 200 climate change projects in over 30 countries.²¹⁵ It is the only CDM accreditor for FCOs under the Kyoto Protocol.²¹⁶ (For most CDM projects, yet an additional DOE must be hired to verify that GHGs were actually reduced.²¹⁷ It is not clear how this will work for FCO CDM projects, given that only one DOE has been certified.)

TreeFarms has also employed the consultancy services of SGS, a Swiss-based multinational enterprise whose \$US4.3 billion a year verification, testing, and certification business is rapidly expanding into the carbon project verification and advisory market.²¹⁸ SGS sometimes serves as a DOE, but also works with companies to help them comply and plan their CDM projects.²¹⁹ (A company cannot do both on one CDM project, *except* for small-scale forestry projects.²²⁰) Consultants such as SGS have sometimes been paid in carbon offset reduction “Certified Emissions Reduction” units, giving them a greater financial stake in generating as many CERs as possible.²²¹

Thus multiple corporate entities may profit handsomely from this FCO. In the financial market that has sprung from the global climate change legal regime, trees have become greenhouse gas storage devices; quanta of carbon are now commodities that can be exchanged multiple times to profit disparate actors. Among those profiting less are the government of Tanzania, which receives very little financial benefit; the local people seem to profit even less. Underlying all of this is the startling realization that even under the most optimistic projections, no GHG reductions result for CDM FCOs under the Kyoto Protocol. Carbon offsets merely allow the same amount of continued GHG emissions in the North. MNEs need not change how they do business, need not develop the technologies that will foment a transition from a fossil fuel economy. FCOs and other carbon offsets

214. CDM Information Platform, Office of National Coordination on Climate Change, <http://cdm.ccchina.gov.cn/website/cdm/pdf/DOE/DOE38.pdf> (last visited Oct. 20, 2008).

215. *Id.*

216. *Id.*

217. Carr & Rosebuj, *supra* note 15, at 50-1.

218. See PDD Uchindile, *supra* note 55, at 5, 37 for SGS involvement; see also <http://www.climatechange.sgs.com/> (last visited Oct. 20, 2008); and SGS, SGS 2007 ANNUAL REPORT 1 (2008), http://www.sgs.com/sgs_2007_fyr_en.pdf.

219. SGS, SGS CLIMATE CHANGE PROGRAMME 3, 6 (2005), http://wwwclimatechange.sgs.com/sgs_climate_change_program.pdf.

220. *Id.*

221. Martijn Wilder & Monique Willis, CER Pricing: *Legal Influences*, in EQUAL EXCHANGE, *supra* note 9, at 28.

present new and innovative ways to profit by inventing and controlling new forms of property in faraway lands, often at the expense of people who hitherto had competing claims to that property.²²²

Standard Setting and Regulation

Validation as a CDM project requires meeting technical requirements about carbon calculation, leakage, and additionality.²²³ The standards for what counts as “sustainable development” or for what project participants have to do to ensure socioeconomic benefits of local communities are more ambiguous.²²⁴ The approved methodologies for reforestation for CDM projects do not include social or human rights criteria.²²⁵ CDM projects must take into account comments of local participants, but need not heed those or cancel a project if local opposition is strong.²²⁶ Although the CDM subjects MNE project developers to “hard” obligations,²²⁷ the standards that regulate those obligations are lax, and, as noted above, the standards are monitored by MNEs who may have self-interested business reasons for not monitoring too closely.

The WWF and other NGOs have developed a “gold standard” tool that can be used by CDM project developers to develop “quality” carbon offsets. The Gold Standard has stricter “additionality” requirements and attends to some sustainable development goals: for example, project developers must “invite” local people to two consultations on the project (which they would not have to do otherwise for a normal CDM project).²²⁸ However, FCOs are not eligible to use this tool.²²⁹

Voluntary market FCOs are subject to no mandatory regulations. Into this breach launches a number of private initiatives designed, and sometimes competing, to regulate these projects. The social and

222. Lohmann, *supra* note 55, and Griffiths, *supra* note 23 document this proposition extensively.

223. Baumert, *supra* note 17, at 373.

224. *Id.* at 399.

225. UNFCCC CDM, Methodologies, Afforestation / Reforestation Methodologies, Approved A/R Methodologies, http://cdm.unfccc.int/methodologies/ARmethodologies/approved_ar.html (last visited Oct. 20, 2008).

226. Schwartz, *supra* note 159, at 470-71.

227. Muchlinski, *supra* note 18, at 570.

228. The Gold Standard Fdn., Introducing the Gold Standard, http://www.cdmgoldstandard.org/uploads/file/CS_intro.pdf (last visited Oct. 20, 2008).

229. THE GOLD STANDARD FDN., THE GOLD STANDARD MANUAL FOR CDM PROJECT DEVELOPERS 9 (version 3, 2006), <http://www.gov.mu/portal/goc/menv/files/cdm/MATERIALS/Gold%20Standard.pdf>.

environmental standards generated by the Climate, Community & Biodiversity Alliance (CCBA) are the most rigorous I have read, and also self-billed as “the most widely used and respected international standard,” with nine projects being validated and about 100 more in the pipeline.²³⁰ The CCBA seeks to “[i]dentify projects that simultaneously address climate change, support local communities and conserve biodiversity” and “[m]itigate risk for investors and increase funding opportunities for project developer[s].”²³¹ Like other environmental certification schemes (e.g., the Forest Stewardship Council’s sustainable timber certification), project developers using these standards hope they promote stability and connote quality, and thus will fetch premium prices from sophisticated consumers.²³² For example, the CCBA standards guide Merrill Lynch’s Sumatra FCO,²³³ by using the standards, Merrill Lynch 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.”²³⁴

Developers using CCBA’s 2008 draft standards can earn two different levels of certification, with the “gold” level reserved for projects that demonstrate some “extra” combination of, among others, “exceptional community benefits” (including being “explicitly pro-poor”), “exceptional biodiversity benefits,” and “climate change adaptation benefits” (focusing on projects that “will provide significant support to assist local communities and/or biodiversity to adapt to the impacts of climate change”).²³⁵ This means that projects can be approved for CCBA certification and *not* meet these requirements. Still, both standards employ rigorous methodologies to measure leakage, prevent false additionality, result in net gains for biodiversity, and guarantee net climate benefits.²³⁶ Furthermore, for basic certification, project developers must result in “net positive community impacts for each constituent socioeconomic or cultural group,”²³⁷ account for

230. CCBA, CLIMATE, COMMUNITY, & BIODIVERSITY PROJECT DESIGN STANDARDS 4 (Draft Second Edition, Version 2.0 2008), <http://www.climate-standards.org/standards/thestandards.html>.

231. *Id.*

232. Jason Morrison & Naomi Roht-Arriaza, *Private and Quasi-Private Standard Setting* in THE OXFORD HANDBOOK OF ENVIRONMENTAL LAW 498, *supra* note 5, at 504; see Forest Stewardship Council, <http://www.fsc.org/> (last visited Oct. 20, 2008).

233. Gunther, *supra* note 114.

234. CCBA, CCB STANDARDS (2007), http://www.climate-standards.org/pdf/2007_11_02_CCBS_factsheet_Web.pdf.

235. *Id.* at 31-33.

236. *Id.*

237. *Id.*, at 24.

and mitigate offsite impacts²³⁸ and have a monitoring plan for onsite project community impacts.²³⁹

CCBA standards are apparently being used in the Tanzania project. In fact, the CDM project documents do not specify the source of standards they are using. Only by reading the CCBA website do I find that they cite the Tanzanian project as using their standards.²⁴⁰

CCBA is a partnership between NGOs (e.g., CARE, The Nature Conservancy, Wildlife Conservation Society), research institutions, and corporations.²⁴¹ The latter includes BP, Intel, SC Johnson, Weyerhaeuser, and carbon-related businesses that stand to profit from FCOs like Sustainable Forestry Management²⁴² and GFA Consulting Group.²⁴³ Groups like TNC or CARE wish to implement some form of regulation that support their goals – preserving biodiversity or alleviating poverty. Carbon businesses may accept such voluntary regulation in order to advertise their corporate social responsibility to consumers, to show that industry can regulate itself (thus obviating the need for more formal legal strictures), and to invest in carbon offsets that are of recognized quality, thus generating CERs that fetch higher prices.²⁴⁴

While potentially solving some problems, voluntary standards may raise others. Will the NGOs or standards writers or certifiers involved be liable if human rights abuses (e.g., evictions from land, starvation) occur as a result of these FCOs? Will a participating NGO be co-opted by the partnership and no longer be able to advocate and critique objectively the

238. *Id.*, at 25.

239. *Id.*, at 26.

240. CCB Projects, *supra* note 163. I find no mention of any standards at all, beyond the technical calculations the CDM requires. In fact, only on the CCBA website did I actually find the PDD, and I appreciate the CCBA's contribution to transparency; I could not locate the PDD on the UNFCCC project webpage, another problem for "environmental democracy!"

241. CCB: Members, http://www.climate-standards.org/pdf/2007_11_02_CCBS_factsheet_Web.pdf (last visited Oct. 20, 2008).

242. Sustainable Forestry Management's "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," Sustainable Forestry Management: About Us, <http://www.sfm.bm/Home/AboutF.htm> (last visited Oct. 20, 2008).

243. GFA Consulting Group's business dealings include forest certification and carbon brokerage and advising. GFA Consulting Group: Business Areas, http://www.gfa-group.de/indices/home_index_sgf_953162.html (last visited Oct. 20, 2008).

possible damaging aspects of these FCOs?²⁴⁵ MNEs are driven to achieve maximum economic value for their stakeholders: Will these MNEs apply voluntary regulatory brakes when profits are at stake? Furthermore, do these kinds of standards contravene the legal obligations that states have to regulate their own environmental and human rights destinies?²⁴⁶ Who will enforce the standards and impose penalties if the project developer doesn't deliver on its promises?²⁴⁷

Private codes may result in environmental protections as rigorous as more formal, state-run legal codes; and, indeed, the CCBA's standards do provide stricter protections than those named under the formal climate legal regime. But, such voluntary codes nonetheless may reflect fewer non-business interests (e.g., promoting human rights or environmental protection), and will be less likely to be enforced through the state's official legal mechanisms.²⁴⁸ That may be precisely the point – as Morrison & Roht-Arriaza express it, such standards “seek to change behavior through a complex mix of incentives and do not rely primarily on external, deterrence-based enforcement.”²⁴⁹ Forces behind these codes may indeed be seeking to shape the content of future, formal legal standards.²⁵⁰ If shown to work, the voluntary standards would present a low-cost regulatory option for participating private actors – low cost because it has already been developed and shown to work, and is already in effect for private actors who are designing and implementing their methodologies.

Whatever the incentive for participants in the CCBA or other voluntary standards, for FCOs, the CCBA's code is more rigorous and affords more protections – for forests, for local people – than any existing formal legal standards, including those of the CDM. As in any new legal/policy instrument, CCBA's standards may not work perfectly at present. Of the three comments received during the Uchindile public participation process (and again, these comments are available and transparent on the CCBA's website, not the UNFCCC's website), one anonymous submission called into question the financial aspects of the plan, and alleged the project is non-additional, given that Green Resources' Sao Hill timber subsidiary is still operating in the area and might well continue to operate even without CDM approval. Furthermore,

[t]he monitoring of sustainable development criteria is lacking in the CDM, but an additional endorsement by CCB certainly requires adequate

245. Muchlinski, *supra* note 18, at 554-5.

246. Morrison & Roht-Arriaza, *supra* note 232, at 526.

247. *Id.* at 524.

248. Ratner, *supra* note 20, at 820.

249. Morrison & Roht-Arriaza, *supra* note 232, at 499.

250. Ratner, *supra* note 20, at 819.

provisions for the inclusion and benefit of affected rural villages. Many villagers, as reported in the PDD, feel that Green Resources has broken promises it made when the village decided to cede its customary land to the district council for allotment to Green Resources. . . . Uchindile villagers have no ownership of the carbon, no ownership of the trees, and no ownership of the profits derived from harvesting.²⁵¹

Clearly, even the additional voluntary safeguards on top of the CDM's lax safeguards mean that MNEs, as they stake out new legal and physical territory in host nations, may still be evading formal regulation that protects the climate, forests, and local communities. This does not mean the CCBA's standards themselves fall short; but it does suggest that those standards may need tighter oversight in how they are verified, implemented and monitored. Currently, if an FCO in the voluntary market uses a voluntary standards instrument but then violates those standards, who will hold them to their word? What domestic or international legal forum will enforce a voluntary code of conduct?

In FCOs, so much is at stake – global profits, local livelihoods, human and ecological community survival – and so little formal domestic or international law regulates the actors who have much to lose and to gain.

Conclusion: Moral Deflection Devices, Profit, International Law, and the Future of the Planet

Writing about the growing trend to transform water from a public good to a privatized resource, McDonald & Ruiters describe age of commodification, where:

the transformation of all social relations to economic relations, subsumed by the logic of the market and reduced to the crude calculus of profit . . . Commodification entails the transformation of relationships, formerly untouched by commerce, into commercial relationships. Under capitalism, many goods and services which previously had no market value or were self-provided within households have been brought into the market fold and mass production. New commodities are created with the expansion of markets to new geographic areas and new sectors that may not yet have been marketized.²⁵²

251. CCBA, Projects, Uchindile Public Comments, Comment No. 3, Sept. 5, 2007, http://www.climate-standards.org/projects/uchindile_comments.html.

252. David A. McDonald & Greg Ruiters, *Introduction* to THE AGE OF COMMODITY: WATER PRIVATIZATION IN SOUTHERN AFRICA 3, 21 (David A. McDonald & Greg Ruiters, eds., 2005).

Goaded by scientists-turned-politicians and politicians-turned scientists,²⁵³ citizens have come to value carbon. As carbon has become reified as a “thing” to be valued, it has acquired legal value, and has become subject to legal norms. Carbon’s value was to be safeguarded using the guiding ethical and legal framework of CBDR. But the legal norms have facilitated the transformation of carbon into a commodity with precious economic value. FCOs have been labeled “CO₂lonialism:” 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.²⁵⁴ Just as in traditional colonialism, once carbon was commodified, an array of actors has stepped in to profit from our concern, standing CBDR on its head by investing in Southern forests to ease transfer of wealth from South to North. The mechanisms they have derived to finance adaptation to climate change – a mere 2 percent surcharge on profit-making CDM CERs, the voluntary market – often privilege financial profit for the North over genuine adaptation that foments social or ecological resiliency in the South.

As long as they are traded for rights to continue to pollute, FCOs do not reduce global carbon emissions. Thus far, too often they have been anti-democratic devices that forestall formal regulations, forestall a transition from a fossil fuel guzzling economy, and forestall development of new, Earth-friendly technologies. If ever a multilateral environmental agreement had the potential to transform the legal environment around which private actors work across borders, the UNFCCC/Kyoto Protocol – designed to avert widespread global catastrophe to human and nonhuman communities – was it. But the climate change legal regime has been co-opted by commodification and profit, aided by Northern government leaders fearful of their own political futures, Northern consumers wishing to continue our own profligate lifestyles, Northern NGOs pursuing environmental or social goals through well meaning but sometimes myopic policies, Southern leaders who may profit individually from these deals or who may be desperate for FDI for their nations,²⁵⁵ World Bank officials pursuing development-as-usual, and, of course, all the private investors and shareholders who can benefit from a booming carbon industry unfettered by sufficient formal regulatory control. Through forest carbon offsets, Northern private actors control lives and lands in impoverished nations whose

253. Scientists have been issuing increasingly “heated” warnings on global climate change in public, *e.g.* NAS, *supra* note 7; for an analysis of science as politicians on behalf of the environment, see DAVID TAKACS, *THE IDEA OF BIODIVERSITY* (1996). For politicians turned scientists, see AL GORE, *AN INCONVENIENT TRUTH* (2006).

254. HUMPHREYS *supra* note 23, at 208; Lohmann, *supra* note 55, at 344; Erasker, *supra* note 147.

communities have little ability to understand what is happening to them, never mind fight it.

At the same time, tropical (and temperate) forests – with their beautiful species and robust ecosystems and ability to store carbon – disappear at alarming rates.²⁵⁶ As they go, so goes the social and ecological resiliency that these forests provide, and thus neighboring humans also lose their ability to adapt to climate change.

So what do we do? If we care about mitigating greenhouse gas accumulation, helping poor (and wealthy) communities adapt, and preserving all of the values/services of forests, how can we make this happen?

To assuage our guilt, some Northern consumers turn to voluntary offsets. Like indulgences that wiped away sins in the Middle Ages, voluntary offsets illustrate “moral deflection devices,” instruments that allow us to feel better about ourselves while continuing to live lives that harm people far from our sights.²⁵⁷ But if we – we in the North who possess the wealth derived from exploiting the planet’s resources and fouling the global atmospheric commons – took the legal obligation of CBDR seriously, we would invest in forest carbon, but not as *offsets* that allow us to continue to pollute and allow the already-wealthy to profit from that pollution.

Nations would have to commit to real, quantifiable, verifiable, stricter (than currently named) reductions in their GHG emissions. That would mean placing real, quantifiable, verifiable, stricter restrictions on the industries that are primarily responsible for these emissions, and real, quantifiable, verifiable restrictions on citizen consumers who demand the products that lead industries to pollute. It also means that Northern nations take responsibility to help Southern nations fulfill their own responsibilities to mitigate and adapt to climate change, through development and dissemination of clean technology and through direct aid that helps bolster social and ecological defenses against the coming climate change catastrophes that will disproportionately harm the Southern poor. This is real aid, guided by the principle of CBDR, over and above the meager 2 percent-of-CERs fee that is currently placed on profit-generating CDM projects. Only after that, within the formal strictures of a climate treaty, would nations be allowed to “offset” – and perhaps garner carbon credits they could sell on an open market. This would give incentive to actually reduce GHGs, and would still provide a mechanism for investing in FCOs –

256. Pagiola et al., *supra* note 88, at 1; Robert O’Sullivan, ‘Reducing Emissions from Deforestation in Developing Countries: An Introduction’ in Streck et al, *supra* note 23, at 179; United Nations Environment Programme, *Reducing Emissions From Deforestation: A Key Opportunity for Achieving Multiple Benefits* 12 (Nairobi, 2007).

257. *Id.*, at 42.

and the array of benefits they potentially provide – within the formal treaty regime.

Citizens should demand that their nations' stated GHG reduction commitments are real, verifiable, and quantifiable, strict, and not "offset" elsewhere. They might demand rigorous adherence not just to CBDR, but to the preventative and polluter pays norms of international environmental law. For example, the United States Superfund/CERCLA law imposed a tax on polluting industries that would be available for cleaning up toxic messes if the original polluter could not be found or could not pay.²⁵⁸ Why not a similar tax on the worst GHG emitters? Exxon-Mobil's profits in 2007 were a staggering \$US40.6 billion dollars.²⁵⁹ A one-tenth-of-one-percent tax on those profits would net \$US40 million from that one MNE alone – about the same amount as all Northern nations spent last year on total adaptation aid to Southern nations!²⁶⁰ Some proportion of this could be spent on carefully managed forest projects that preserve biodiversity at the same time they sequester carbon and help local communities adapt to climate change.

Private actors seem not only to evade formal regulation of their activities; operating in a legal vacuum, they seem to have captured the regulatory apparatus, and with the aid of IFIs and NGOs, they are writing new regulations that allow them to profit from the GCC legal regime. They have created a new industry worth billions of dollars. Northern consumers abet this effort; we wish to continue our own over-consuming lifestyles that lead to excessive "luxury" emissions (as opposed to "survival" emissions from the South).

But some voluntary standards, especially the gold certification level promoted by the CCBA, are nonetheless superior to a weak formal international legal regime that neither has named strict standards nor evolved a regulatory apparatus capable of regulating private actors in the CDM or voluntary market for FCOs. Thus the voluntary standards emerge as valuable tools we can use both as legal mechanisms in their own right, and as templates for formal international legal efforts to derive rules for regulating FCOs such that they genuinely mitigate GHGs, and help Southern human and nonhuman communities adapt to climate change.

Lawyers interested in environmental preservation and human rights have an obligation in all this. Global climate change and deforestation, like so many other global problems, points to the absence of a robust system of international environmental law, with no rigorously codified, precise

258. Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601–9675, 9613(f) (2006).

259. Steven Mufson, *Exxon Mobil's Profit in 2007 Tops \$40 Billion*, WASHINGTON POST, Feb. 2, 2008, available at <http://www.washingtonpost.com/wp-dyn/content/article/2007/02/01/AR2007020100714.html>.

260. See note 79 above where I cite this figure.

principles and concrete means of enforcement. The Preventative and Polluter Pays Principles, the emerging norms of Environmental Democracy, and, especially, CBDR, must be made more precise and thus justiciable by citizens anywhere whose legal rights are violated by unjust FCOs (or any other environmental norm violation). Lawyers can help national leaders craft legal responses that indicate that governments believe these norms are binding *opinio juris*. As such, these norms must find their way into the successor to the Kyoto Protocol and other multilateral environmental agreements. Lawyers can help design strict forms of enforcement through an international body attached to the UNFCCC or through domestic applications. These norms should become cornerstones of domestic and international policy, the standards by which all policy and actions are judged.

The voluntary market continues to hold promise as a way to mitigate greenhouse gas buildup, help poor communities adapt, fulfill the mandates of CBDR, and preserve all the values of forests. Several sets of competing regulatory standards are vying for market share. I would suggest the COP to the UNFCCC come up with one set of standards, perhaps drawing from the best of the voluntary standards, but with stronger principles for respecting local human rights. The CCBA standards – particularly their gold level – seem a good place to start, as these standards do attend not only to ecological values that forests provide, but also to the needs of people dependant on those forests. If reality does not always live up to the promise of the norms for regulating a nascent commodity in this nascent industry – as the Tanzania case study above suggests – that does not mean that stricter guidelines, stricter monitoring, and stricter enforcement could not improve application of these norms.

Furthermore, the future of FCOs should lie not in “junk” carbon, but rather in “boutique” carbon, i.e., asking citizens and corporations to take CBDR as an ethical and legal principle seriously, and invest in the best possible FCOs to preserve the forests that help communities adapt and that preserve biodiversity, but do so without destroying local livelihoods, and doing so in a way that generates profits for – and derives from the wishes of – local communities. Particularly were these boutique carbon FCOs to command higher prices on an international market, they could then become the standard,²⁶¹ crowding out the market in inferior FCOs that neither offer genuine adaptation nor assurances that local people derive the bulk of the benefits and guide the direction of the deals.

Lawyers ought to comment more frequently and more rigorously on proposed CDM FCO (or other kinds of CDM) projects that seem questionable from scientific, legal (environmental or human rights) or

261. This is what Merrill Lynch is banking on in their Sumatra deal. Gunther, *supra* note 114.

ethical perspectives. A first step would be to demand that the CDM EB actually post these proposed projects where they are legally required to do so! When the EB makes decisions that we feel fulfill neither the Kyoto Protocol's explicit legal norms nor the customary norms of international environmental law, we can appeal the EB's decisions. We can use existing international human rights law mechanisms to complain about FCOs that do not protect human rights. While private actors notoriously elude international human rights law duties, all nations have a duty to respect, protect, and fulfill human rights. When Southern nations allow FCOs that force people off their land, they are failing in their duty to *respect*; i.e., they are directly denying human rights to their people. When they fail to control FCOs through legislation and policies, they are failing in their duty to *protect* their peoples' human rights. When Northern nations allow their private actors to avoid legal mandates through questionable human rights activities, they, too, are failing in their responsibilities to protect human rights. Nations that do not proactively seek to regulate potential human rights activities of their private actors, even if they occur abroad, are evading their duty to *fulfill* human rights.

We can use various human rights fora (e.g., complaint mechanisms) and regional courts, using Earthjustice's landmark hearing on behalf of the Inuits before the Inter American Commission on Human Rights as one template.²⁶² We can scrutinize Norway's plans to become carbon neutral by investing over a half-billion per year in FCOs: if Norway is acting qua Norway, it must develop and follow a set of human rights principles to guide these offset projects. We can more carefully codify CBDR commitments, both in the successor to the Kyoto Protocol and elsewhere, and pursue violations through the International Court of Justice. Furthermore, if any of these FCOs occur in the 40 European nations who are signatories to the Aarhus Convention, we can investigate whether local people's full rights to participate in environmental decision making have been observed, and file complaints accordingly. New European-based public interest environmental law firms like Client Earth²⁶³ can bring suits against European nations (all of whom are Kyoto signatories) who are allowing their private actors to develop human rights violating projects and whose private actors are benefiting from trade in the E.U. trading scheme.

262. Petition to the Inter American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States (submitted Dec. 7, 2005), http://www.earthjustice.org/library/legal_docs/petition-to-the-inter-american-commission-on-human-rights-on-behalf-of-the-inuit-circumpolar-conference.pdf.

263. See Client Earth, <http://www.clientearth.org/> (last visited Oct. 20, 2008).

The U.N. Commission on Human Rights has proposed a set of legal norms to constrain the actions of transnational corporations.²⁶⁴ Ideally, these norms would confer rights to be held by individuals, justiciable in any domestic courts (or perhaps some international legal fora), actionable against private entities who transgress the norms. These legal norms would bypass the legal stranglehold of nation states, who, as duty bearers and prosecutors under international law often lack the means or incentives to enforce them, and whose direct rights as nations are often not infringed by environmental transgressions. Developing a legal system to guide FCOs and thus help people adapt to the ravages of global climate change while preserving the Earth's gorgeous biological resources would be a good place to implement development of such norms. We could start by forging a clear system of rights that must be respected when implementing FCOs, from which corresponding duties would inhere to all actors, state and non-state, who participate in such FCOs. Or we could start by naming appropriate duties, applicable to all actors, and build a system of liability and enforcement to prevent and punish breaches of such duties.²⁶⁵

Global climate change has the potential to turn the natural world on its head and to destroy human communities, rich and poor, which depend on the natural world. To prevent these catastrophes, we need to turn the international legal world on its head. We need a system of international law powerful enough to preserve at least slivers of forest, scraps of biodiversity, and shreds of human dignity. The legal principles we need – preventative, polluter pays, environmental democracy and a host of environmental human rights, CBDR – are there, as are some strong codes of voluntary standards that provide a starting point for formal lawmaking. Missing is precision, enforcement, justiciability and the will to shape and use international law to de-emphasize the nation state, and to tame “the market” and its relentless commodification of the Earth's social and natural assets.

264. U.N. Comm. On Human Rights [UNCHR], Sub-Comm. On the Promotion & Protection of Human Rights, 55th session, Agenda item 4, *Economic, Social & Cultural Rights*, U.N. Doc. E/CN.4/SUB.2/2003/12/REV.2 (Aug. 26, 2003).

265. Ratner, *supra* note 20, at 827.

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