

PROTECTING YOUR ENVIRONMENT, EXACERBATING INJUSTICE: AVOIDING “MANDATE HAVENS”

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INTRODUCTION

The story in the “Business Day” section of the *New York Times* begins, somewhat breathlessly: “San Diego – In an unmarked greenhouse, leafy bushes carpet an acre of land here tucked into the suburban sprawl of Southern California. The seeds of the inedible, drought-resistant plants, called jatropha, produce a prize: high quality oil that can be refined into low-carbon jet fuel or diesel fuel.” The SGB company, whose mission is “Bringing the opportunities of energy crops to reality,”¹ uses DNA sequencing technology to grow hybridized, domesticated strains of jatropha. SGB “has deals to plant 250,000 acres of jatropha in Brazil, India, and other countries expected to eventually produce about 70 million gallons of fuel a year. That has attracted the interest of energy giants, airlines, and other multinational companies seeking alternatives to fossil fuels.” Why? “They see jatropha as a hedge against spikes in petroleum prices and as a way to comply with government mandates that require the use of low-carbon fuels.”²

Nowhere in 1300+ words does the author discuss where the quarter of a million acres would come from. What grows on that land now? Who, in Brazil, or India, or “other countries,” depends on that land for their livelihoods? How is SGB obtaining rights to that land? Despite claims that jatropha grows on “wastelands”—poor soils with little water—analyses by

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1. *About*, SEEDS, GENOMICS, BIOMATERIALS, <http://sgbiofuels.com/pages/company/index.php> (last visited Apr. 3, 2014).

2. Todd Woody, *Jet Fuel by the Acre*, N.Y. TIMES, Dec. 25, 2013, at B1.

the Center for International Forestry Research (CIFOR) and others suggest that the booming (or blooming) market for jatropha is displacing traditional crops grown for food, or grown on land where forests previously grew, including high biodiversity value forests in Ghana, Tanzania, and Mozambique.³ CIFOR suggests that investors speculating on this incipient boom are buying up swathes of forestland—while undermining environmental sustainability in the developing world—to help fulfill environmental quality mandates in the developed world.⁴

The axioms of the environmental justice (EJ) movement obtain abroad as well as at home: 1) some people—disproportionately poor, disproportionately of color—bear a disproportionate cost of the externalities of industrial overproduction and overconsumption; 2) some people—disproportionately poor, disproportionately of color—are far less likely to enjoy the benefits of this overproduction and overconsumption, including environmental amenities like clean air, clean water, waste buried out of sight and mind, green space to enjoy, or simply access to nature's products and services that make life possible; and 3) democracy in decision making, where the poorest are full participants and are building capacity to negotiate for fair shares of burdens and benefits, is crucial to achieve an environmentally just world.

In other words, EJ requires distributive and procedural justice. While the EJ movement this Symposium issue celebrates arose in the United States, its central tenets apply if we are to achieve justice across international borders.⁵ Global EJ concerns itself with the transboundary distribution of environmental burdens and benefits and the resulting unequal distribution of environmental benefits and burdens.⁶ This paper examines what happens when mandates to clean up local environments and to mitigate greenhouse gas (GHG) emissions in the global North result in environmental injustice in the global South.⁷ It proposes solutions to

3. See Gao et al., *A Global Analysis of Deforestation Due to Biofuel Development* 26, 27–28 (Ctr. for Int'l Forestry Research, Working Paper 68, 2011). See also Mackinnon Lawrence, *Biofuels Producers Hunting Foreign Fields*, FORBES (Oct. 23, 2013, 11:31 AM), <http://www.forbes.com/sites/pikerresearch/2013/10/23/biofuels-producers-hunting-foreign-fields>.

4. See Gao et al., *supra* note 3, at 26–28.

5. See Tom E.R.B. West, *Environmental Justice and International Climate Change Legislation: A Cosmopolitan Perspective*, 25 GEO. INT'L ENVTL. L. REV. 129, 130–31 (2012).

6. André Nollkaemper, *Sovereignty and Environmental Justice in International Law*, in ENVIRONMENTAL LAW AND JUSTICE IN CONTEXT 253, 259.

7. I use “North” to refer to developed or industrialized nations. Until recently, Northern nations have been primarily responsible for creating the problems of global climate change through pollution associated with industrialization. “Southern” nations are those in the process of development; Southern nations are least responsible for creating global climate change, yet will suffer the most from its consequences.

prevent Northern environmental laws from creating unjust climate change “mandate havens” in poor, distant communities.

While reviews of international justice cite the “philosophical pandemonium”⁸ of what “justice” actually means, I would offer the clarification that what is “just” is what is “deeply equitable.” By “deep equity,” I refer to laws, policies, and cultural practices that act in synergy to maximize the health and potential of all individuals, communities, and ecosystems. The equity is “deep” because values take root within each individual. It is also deep because it asks that we fundamentally reformulate our community structures and responsibilities, and situate these values and responsibilities in our legal systems and policy choices. Our laws and policies would, in turn, support values and actions promoting even deeper equity.⁹

If we seek to realize international EJ through laws and policies that create a deeply equitable world, addressing global climate change is our most obvious current starting place. Climate change stems from current and historical overconsumption of global resources leading to planetary climactic disruptions that will disproportionately harm the poorest people—who did least to create the problem.¹⁰ While historically the U.S. and other developed nations have been the primary drivers of climate change, increasingly the developing world is exacerbating the problem, and it is the wealthiest in those countries, as well, who will benefit at the expense of the poorest. Prof. Paul Harris calls for a “moral cosmopolitanism” that “requires us more carefully and explicitly to consider the obligations of the world’s affluent people—those who consume the most (including great quantities of things we do not need) and generate the most atmospheric pollution per capita—to do much more to address this problem, regardless of whether they live in affluent or poor states.”¹¹

These obligations find legal expression in the principle of Common

8. PAUL G. HARRIS, *WORLD ETHICS AND CLIMATE CHANGE: FROM INTERNATIONAL TO GLOBAL JUSTICE* 32 (2010).

9. David Takacs, *Forest Carbon Offsets and International Law: A Deep Equity Legal Analysis*, 22 *GEO. INT’L. ENVTL. L. REV.* 521, 526 (2010).

10. UN-REDD PROGRAMME, *GUIDELINES ON FREE, PRIOR AND INFORMED CONSENT* 8–10 (2013), available at http://www.un-redd.org/Launch_of_FPIC_Guidelines/tabid/105976/Default.aspx (follow the link “UN-REDD Programme Guidelines on Free, Prior, and Informed Consent (FPIC)); Stephanie Baez, *The “Right” REDD Framework: National Laws That Best Protect Indigenous Rights in a Global REDD Regime*, 80 *FORDHAM L. REV.* 821, 840 (2011); ANNELIE FINCKE, *INDIGENOUS PEOPLES AND REDD-PLUS: CHALLENGES AND OPPORTUNITIES FOR THE ENGAGEMENT OF INDIGENOUS PEOPLES AND LOCAL COMMUNITIES IN REDD-PLUS*, 2–3 (2010), available at http://cmsdata.iucn.org/downloads/a4_iucn_indigenous_peoples_and_redd.pdf.

11. HARRIS, *supra* note 8, at 2.

but Differentiated Responsibilities (CBDR)—the foundational legal and ethical principle under UNFCCC/Kyoto Protocol.¹² As described in the UNFCCC's Art. 3(1):

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.¹³

CBDR would require that all nations mitigate GHG emissions and contribute to adaptation efforts, but requires more significant contributions from Northern nations (and, if we follow Harris' view, all wealthy citizens). The climate change conventions' legal requirements combine pragmatism with ethics. Pragmatically, some nations, predominantly in the global North, have greater financial resources to mitigate GHG buildup and help other nations adapt; those nations gained these resources from industrial development whose excesses continue to pollute the global atmospheric commons. Thus the North bears the primary responsibility to reduce emissions and help the South adapt to the pollution the North has emitted en route to economic prosperity.¹⁴

In carrying out their common but differentiated responsibilities, the North should not exacerbate the injustices it purports to be mitigating. Differences in wealth, power, environmental burdens, and environmental benefits should narrow, not widen. While developed nations have enriched themselves without paying for the pollution externalities of their development, these nations are now beginning to support international treaties and pass domestic laws that require curbing their GHG emissions (while simultaneously fulfilling other domestic environmental goals.) The rules chosen to mitigate GHG buildup and adapt to climate changes that

12. For an overview of CBDR, see Takacs, *supra* note 9, at 538–41 (2010); United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 106, 31 I.L.M. 849 (1992) (“[T]he global nature of climate change 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.”). See also Kyoto Protocol to the United Nations Framework Convention on Climate Change, art. 10, Dec. 11, 1997, 2303 U.N.T.S. 148, 37 I.L.M. 22 (imposing obligations on the parties based on CBDR); Lavanya Rajamani, *The Nature, Promise, and Limits of Differential Treatment in the Climate Regime*, 16 Y.B. INT'L ENVTL. L. 81, 93 (2005).

13. United Nations Framework Convention on Climate Change, *supra* note 12, 1771 U.N.T.S. at 169.

14. See Anita M. Halvorssen, *Common, But Differentiated Commitments in the Future Climate Change Regime—Amending the Kyoto Protocol to Include Annex C and the Annex C Mitigation Fund*, 18 COLO. J. INT'L ENVTL. L. & POL'Y 247, 254–55 (2007); Philippe Cullet & Annie Patricia Kameri-Mbote, *Activities Implemented Jointly in the Forestry Sector: Conceptual and Operational Fallacies*, 10 GEO. INT'L ENVTL. L. REV. 97, 102–03 (1997); Rajamani, *supra* note 12, at 89, 93.

cannot be prevented will be judged “fair” according to how those rules distribute costs and benefits among the world’s citizens, and the processes under which these rules are derived and implemented; what is “fair” is also what is “deeply equitable.”¹⁵

Poor, rural citizens in developing nations seldom have power to influence environmental decision-making in their own nations, let alone in foreign nations.¹⁶ Often their land is their only asset—whether they own it, or are in some type of usufruct arrangement for leasing the land and its services, or are relying on traditional laws of community use, or simply are dependent on forest products and free ecosystem services.¹⁷ They suffer most when decisions about their land are made to maximize capital in distant capitals. As Schlosberg expresses it, “Democratic and participatory decision-making procedures are then both an element of, and a condition for, social justice.”¹⁸ Suttles asserts that the EJ movement is a “transformative, participatory social campaign” that “functions on a democratic, nonhierarchical level that espouses a ‘bottom up’ approach involving all members of the affected population. As such, it is a distinctly empowering vehicle that galvanizes and catalyzes ordinary people to advocate in their own self-interest.”¹⁹

I have written elsewhere about Environmental Democracy in REDD+ in developing nations.²⁰ When making decisions about how vital environmental resources will be used, local communities should be full partners. Local citizens understand the land and resources, and depend on these resources. Environmental democracy norms comprise the right to participate in environmental decision-making; the right to access to information on environmental decisions; the right to redress and remedy when environmental rights are violated; and the right to Free Prior and Informed Consent (FPIC) when governments formulate plans that will

15. RUCHI ANAND, INTERNATIONAL ENVIRONMENTAL JUSTICE: A NORTH-SOUTH PERSPECTIVE 11 (2004). For a thorough review of Environmental Democracy, see David Takacs, *Environmental Democracy and Forest Carbon (REDD+)*, 44 ENVTL. L. 71, 96 (2014).

16. Tseming Yang, *International Environmental Protection: Human Rights and the North-South Divide*, in JUSTICE AND NATURAL RESOURCES: CONCEPTS, STRATEGIES AND APPLICATIONS 87, 90 (Kathryn M. Mutz, Gary C. Bryner, & Douglas S. Kenney eds., 2002); see Carmen Gonzalez, *Genetically Modified Organisms and Justice: The International Environmental Justice Implications of Biotechnology*, 19 GEO. INT’L ENVTL. L. REV. 583, 639 (2007).

17. Gonzalez, *supra* note 16, at 591; David Takacs, *FOREST CARBON: LAW + PROPERTY RIGHTS* 15 (2009).

18. David Schlosberg, *Reconceiving Environmental Justice: Global Movements and Political Theories*, 13 ENVTL. POL. 517, 519 (2004).

19. John T. Suttles Jr., *Transmigration of Hazardous Industry: The Global Race to the Bottom, Environmental Justice, and the Asbestos Industry*, 16 TUL. ENVTL. L.J. 1, 35–36 (2002).

20. See generally Takacs, *supra* note 15.

affect vital resources and lands. When governments or developers of environmental conservation and development programs fail to respect environmental democracy norms, they may consign a project to failure, and worse, violate the human rights and even destroy the lives of local citizens.²¹

I and other scholars have analyzed the justice implications of climate change: those who have done least to create the problem will suffer the most.²² In this article I offer a twist: I examine what happens when Northern GHG-reducing laws and policies (designed to avoid catastrophic, global ecosystem change and the resulting environmental injustices that will redound) paradoxically exacerbate injustice. To avoid this, we must pay close attention to populations in distant lands that will be impacted if our laws are implemented carelessly. Various authors have described environmental injustices in international agreements where the North carries disproportionate power in determining the results of negotiated solutions to climate change and other environmental problems.²³ Anand notes that the “North is likely to use its position of privilege and power to maximize the benefits it receives and minimize its costs, even at the expense of justice or equity.”²⁴ The examples I discuss herein pertain not only to the terms of transnational legal instruments, but also to Northern domestic laws purporting to ameliorate injustice, but instead sometimes perpetuating it. These examples illustrate situations where nations, their businesses, and their citizens, try to fulfill legal and ethical mandates at low cost, with justice and equity possibly suffering as a result. Injustices are perpetuated on poor people in rural areas in the South by citizens of the North (and, in some cases, elites within their own nations), whose original intentions may (sometimes) have been well-meaning, but who have not considered the injustice offsets of their policies.

This paper starts with this observation: To compensate for a grave environmental injustice—climate change caused by industrial pollution—Northern legal solutions should not exacerbate the problem. In this article, I describe how EJ goals are undermined when domestic nations of the North implement GHG-reducing laws, and I offer some solutions towards ensuring that laws aimed to improve domestic environments and to

21. For a thorough review, *see id.*

22. Naomi Roht-Arriaza, ‘First, Do No Harm’: *Human Rights and Efforts to Combat Climate Change*, GA. J. INT’L & COMP. L. 593, 594 (2010); UN-REDD PROGRAMME, *supra* note 10, at 8–10; Baez, *supra* note 10, at 840; Fincke *supra* note 10, at 2–3; HARRIS, *supra* note 8, at 2.

23. David Hunter, *Human Rights Implications for Climate Change Negotiations*, 11 OR. REV. INT’L L. 331, 358 (2009).

24. Anand, *supra* note 15, at 56.

mitigate the externalities of Northern consumption actually contribute to a more just world.

Drawing on the concept of “pollution havens”—places in the global South that attract the worst industrial excess of the North’s production and consumption—I introduce the concept of “mandate havens.” In a “mandate haven,” a Northern body will pass a law mandating environmental protection; its implementation, however, may have (perhaps unintended) detrimental impacts in the South. Such mandates include international agreements driven by Northern negotiators, national and subnational laws implementing international commitments, or voluntary efforts of citizens and businesses. How these initiatives are worded and implemented has profound impacts in the South, in locations where communities have played a scant role in creating climate change or in formulating the solutions to the problems they have not created but whose effects they will bear.

In particular, I explain how mandate havens result from laws requiring biofuels production, and from laws that facilitate Reducing Emissions from Deforestation and forest Degradation, or “REDD+.” I appraise mandate havens resulting from EU and US laws requiring increasing production of plant-based fuels to replace traditional hydrocarbon-based biofuels, and show how the developing world is proving an ever more conducive place to grow the plants that provide the feedstock for biofuels. I display how biofuels laws result in unjust mandate havens in the developing world, with scant attention from the developed world for the impacts of their policies. I then introduce REDD+, where investors pay people—usually in the global South—to reforest degraded land or to refrain from cutting down trees; the investor can sell the carbon thus stored in these trees on an international market. I review how promoters of both biofuels plantations and REDD+ paint win-win-win scenarios that these schemes help climate, the local environment, and impoverished rural people, and demonstrate that the reality, however, may be quite different on the ground, as local communities may lose access to land essential to their livelihoods. I present potential solutions to unjust mandate havens: models are emerging for how governments, businesses, and private citizens can work across national boundaries to mitigate environmental injustice both through reducing pollution back home while alleviating poverty and protecting local ecosystems abroad. These EJ enhancing models can and should be implemented for both biofuels and REDD+.

POLLUTION HAVENS

Discussing international economic interdependence and justice, Beitz describes “a pattern of relationships which are largely non-voluntary from the point of view of the worse-off participants, and which produce benefits for some while imposing burdens on others.” This inequality “has the effect of taxing poor nations so that others may benefit from living in ‘just’ regimes.”²⁵

To illustrate this concept in the environmental realm, various authors have described “pollution havens.”²⁶ Pollution—an externality created by industrial society—may follow the path of least resistance to those least able to refuse the burden. Developed nations regulate industrial activity to minimize their own economic and environmental burdens for the benefits of their own citizens who demand both salubrious environmental quality *and* cheaper goods.²⁷ When the costs of complying with these environmental regulations are greater than the costs of relocating a business or transporting its waste products, it makes business (albeit not justice) sense to shift production or waste disposal to the developing world, where standards (and enforcement of those standards) are weaker.²⁸

Although some authors question the empirical evidence for pollution havens,²⁹ others cite clear evidence that businesses do, in fact, pollute elsewhere when it becomes too expensive to comply with pollution regulations back home.³⁰ Developing nations may engage in a “race to the bottom”: they deregulate to attract desperately needed economic development, even if that development results in environmental degradation.³¹ As Keeton expresses it, “the race to the bottom and its resulting disparity will thus linger as an unfortunate byproduct of domestic environmental regulation.”³²

As developed nations tighten their pollution and other environmental

25. Charles R. Beitz, *Justice and International Relations*, 4 PHIL. & PUB. AFF. 360, 374–75 (1975).

26. Chelsea M. Keeton, *Sharing Sustainability: Preventing International Environmental Injustice in an Age of Regulation*, 48 HOUS. L. REV. 1167, 1171–73 (2012).

27. Antonius R. Hippolyte, *Calls for National Intervention in the Toxic Waste Trade with Africa: A Contemporary Issue in the Environmental Justice Debate*, 58 LOY. L. REV. 301, 312 (2012); see Kenda Jo M. McCrory, *The International Exportation of Waste: The Battle of the Path of Least Resistance*, 9 DICK. INT'L L. ANN. 339, 340 (1991).

28. See, e.g., Suttles, *supra* note 19, at 11–12.

29. See, e.g., Gunnar S. Eskeland & Ann E. Harrison, *Moving to Greener Pastures? Multinationals and the Pollution Haven Hypothesis*, 70 J. DEV. ECON. 1 (2003).

30. Keeton, *supra* note 26, at 1169.

31. *Id.*; Hippolyte, *supra* note 27, at 302.

32. Keeton, *supra* note 26, at 1176.

laws to protect the health and quality of life of their citizens, we close our eyes to those who may suffer out of sight as a result of our own ever more rigorous standards.³³ For example, tightened regulation and torts suits over asbestos in the developed world shifted asbestos manufacture to developing nations, where “competitive deregulation” meant that “asbestos is life” for desperately poor people who had no choice but to face the health risks associated with its manufacture.³⁴ Shipping e-waste and toxic waste to the Global South for processing (estimates of 3 million tons of hazardous waste from the North to other nations each year³⁵), or relocating factory production to developing nations with lax environmental and safety standards that wouldn’t meet Northern regulatory laws create “havens” for practices that would not meet Northern legal standards. We in the North protect our quality of life by dumping on the already poor in the South, widening inequality and fomenting environmental injustice.³⁶

CLIMATE CHANGE MANDATE HAVENS

Under the Polluter Pays Principle, polluters should bear the cost of cleaning up messes they have made.³⁷ Yet the developed world has not fully paid, and is not fully paying, for the pollution externalities we have ignored en route to enriching ourselves. To fulfill the Polluter Pays Principle, and to compensate for grave environmental justices caused by our GHG pollution, our solutions should mitigate and not exacerbate problems our pollution causes.

Yet, increasingly, land in the developing world is arrogated by what I call “climate change mandate havens.” In their attempts to address GHG pollution of the atmospheric commons caused by historical and continued overconsumption of fossil fuels, nations of the global North have passed laws designed to force citizens and industries to reduce GHG emissions while weaning themselves from high-GHG emitting fossil fuels. Or, citizens and businesses take it upon themselves to find ways to offset their own GHG emissions. But even when intentioned to result in greater environmental justice, methods of complying with these GHG reductions may result in greater environmental *injustice*.

As Prof. Alice Kaswan writes, movements to promote both “sustainability” and EJ seek to “guard against the risk of ‘tunnel vision’:

33. See Hippolyte, *supra* note 27, at 303; Keeton, *supra* note 26, at 1178.

34. See Suttles, *supra* note 19, at 28–29.

35. Hippolyte, *supra* note 27, at 308.

36. Keeton, *supra* note 26, at 1178; Suttles, *supra* note 19, at 35; Gonzalez, *supra* note 16, at 590.

37. West, *supra* note 5, at 153–56.

one-dimensional environmental policymaking that fixates on a single goal (like reductions in GHG emissions) without considering or addressing broader implications.”³⁸ Acknowledging the possibilities of injustice is the first step towards justice. We are more likely to address international environmental injustice if we explicitly address international EJ in our laws or in standards that govern how our laws are to be implemented across national borders.

When calculating actual GHG reductions from any climate change legal prescription, entities increasingly must perform full cost, “life cycle” accounting: We look at the GHGs emitted when raw materials are obtained and transported, products are manufactured, land uses change indirectly to accommodate GHG-saving land uses elsewhere, etc.³⁹ Lifecycle greenhouse gas emissions are defined as the aggregate quantity of greenhouse gas emissions (including direct emissions and significant indirect emissions such as significant emissions from land use changes), related to the full fuel life cycle, including feedstock generation, extraction, distribution and delivery, and use of finished fuel.⁴⁰ In the U.S., to qualify as “renewable,” under federal law, a fuel’s pathway must reduce lifecycle GHG gas emissions by 20% compared to baseline lifecycle GHG emissions—defined as the average lifecycle GHG emissions for gasoline or diesel (whichever is being replaced by the renewable fuel) sold or distributed as transportation fuel in 2005.⁴¹ When calculating GHG emission reductions to comprise not just direct land clearance but indirect land use changes (ILUCs), some studies suggest biofuels mandates may *increase* GHG emissions.⁴²

We should adopt this “life cycle” approach for social justice safeguards, as well. That is to say, we should do a full cost, life cycle international environmental justice accounting when designing, implementing, and monitoring our climate change legal mandates.

One might hope that international law could address the injustices of climate change mandate havens. But international law, as currently formulated, is not sufficiently robust to address the problems of international EJ discussed here. Proposed solutions to avoid transnational pollution havens include trade barriers, extraterritorial regulation, and

38. Alice Kaswan, *Environmental Justice and Environmental Law*, 24 FORDHAM ENVTL. L. REV. 149, 170 (2013).

39. See, e.g., PRODUCT LIFE CYCLE ACCOUNTING AND REPORTING STANDARD, GREENHOUSE GAS PROTOCOL (2011), available at http://www.ghgprotocol.org/files/ghgp/public/Product-Life-Cycle-Accounting-Reporting-Standard_041613.pdf.

40. 42 U.S.C. § 7545(o)(1)(H) (2010).

41. 40 C.F.R. § 80.1401 (2013).

42. See Gao, et al., *supra* note 3, at 23.

international legal agreements.⁴³ But all of these remain aspirational, cumbersome, unpredictable, time consuming, and resource intensive. International Human Rights Law requires nations to respect, protect, and fulfill the human rights of their own citizens.⁴⁴ But economically challenged Southern nations hosting biofuels and REDD+ schemes have incentives to accept the benefits of biofuels and REDD+, and lack the power to counter the hegemonic international actors promoting these ventures. Northern nations promoting biofuels and REDD+ have incentives to allow their citizens and corporations to continue to profit from these schemes, and often lack legal jurisdiction to remediate problems in distant locales. International law simply has not worked to contain pollution havens, and its mechanisms are unlikely to work soon or comprehensively to address these problems.

Of course we should continue to develop and employ existing international human rights law processes to address mandate havens. But I would offer other, practicable options to fill in the dysfunctional gaps of domestic laws in North and South and international law working across borders. Self-monitoring—whether it is individuals, businesses, or nations—with external validation is a crucial step towards ensuring international EJ in climate change mandate havens. When writing domestic legislation in the North or when formulating standards for business self-regulation of offsets, specific standards should include clear criteria for how laws mandating biofuels or carbon offsets may or may not operate. Mandates may incorporate NGOs as certifiers and verifiers of compliance with national requirements, or require government inspectors to ensure compliance.⁴⁵

Furthermore, these standards, if widely implemented, can lead to custom. I am not speaking of “customary international law,” where nations consistently adhere to a norm, and act thusly because they believe they are legally bound to do so—although that is a desirable goal. I am merely saying that these standards may become *industry* custom, because they are too expensive to circumvent, or to devise and implement alternate standards, or it becomes morally unacceptable to devise and implement less equitable standards.

If biofuels mandates require close attention to whose land the biofuels are grown on, and to protecting the most vulnerable from (un)intended ancillary impacts, it will make usurping land abroad for biofuels more difficult or impossible. Justice-enhancing implementing standards will raise

43. Keeton, *supra* note 26, at 1195.

44. Roht-Arriaza, *supra* note 22, at 595.

45. Suttles, Jr., *supra* note 19, at 46.

the cost of biofuels, and thus force consumers to consume less rather than continue to consume an equal amount of fuel that has questionable environmental benefits in the first place. If REDD+ projects and regional schemes must attend both to MMRV requirements⁴⁶ that ensure everyone is doing what they say *and* to environmental democracy rights that guarantee procedures for maximum participation from local communities who will be most affected (for better or worse), REDD+ may become a scheme for realization of genuine CBDR, whether it is nation to nation, state to state, or citizen to citizen, where the wealthiest pay the full price of our “offsets.” Or, REDD+ may become too expensive, in which case we may lose its biodiversity benefits but also lose a pressure valve that allows us to continue our profligate, GHG emitting habits. Full cost EJ accounting in REDD+ may mean what we lose in prospective scale of REDD+ we may make up in quality of projects that genuinely promote international EJ. For both biofuels and REDD+, full cost, life cycle accounting for inequitable social impacts must be included if we are to avoid creating environmentally unjust climate change mandate havens.

BIOFUELS: CLEAN FUELS WITH DIRTY HANDS

WHY DO WE NEED TO ATTEND TO EJ WHEN IMPLEMENTING BIOFUEL LAWS?

Various Northern governments—for example the EU, the US federal government, and California—have adopted Renewable Fuel Standards (RFS) that mandate that fuels must contain a certain percentage of plant based feedstocks.⁴⁷ Laws promoting the rush to biofuels emphasize enhancing domestic energy security and reducing GHG emissions.

Corn and sugar cane are the primary biofuel feedstocks, although sorghum, castor bean, sugar beet, sunflower, and, as mentioned earlier, jatropha are also in production.⁴⁸ “Second generation” biofuels, from the “waste” parts like the leaves on a corn stalk, or from wood and agricultural waste, remain a goal desired,⁴⁹ but still not technologically feasible for

46. See generally David Takacs, *Forest Carbon (REDD+), Repairing International Trust, and Reciprocal Contractual Sovereignty*, 37 VT. L. REV. 653, 716 (2013).

47. Gao, *supra* note 3, at 2.

48. *Id.* at 3.

49. Roht-Arriaza points out that even second-generation biofuels can potentially have justice implications. Economic benefits from “waste” products can provide the marginal benefit that tilts land use towards large-scale monocultures. And so-called “waste” may sometimes be useful to local people. For example, in a Clean Development Project in Thailand, rice husks viewed by project developers as waste were components of traditional fertilizers. Roht-Arriaza, *supra* note 22, at 600.

widespread use.⁵⁰

Over 60% of US GHG emissions come from combusting fossil fuels.⁵¹ Just over half of this comes from producing electricity, and just under 30% is generated by transportation.⁵² In the US, the RFS was first required as part of the 2005 Energy Policy Act, which mandated 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012.⁵³ US law now requires that fuel providers provide increasing volumes of both traditional (e.g. ethanol from corn or sugar cane) and second-generation biofuels yearly through 2022,⁵⁴ with the 2007 Energy Independence and Security Act requiring 36 billion gallons of renewable fuel by 2022.⁵⁵ Nearly all gasoline sold in the US contains 10% ethanol; in Brazil, most vehicles can use a 100% ethanol blend.⁵⁶ Corn comprises nearly all ethanol used in fuels in the US, and about 40% of the nation's corn goes not into food, but into ethanol.⁵⁷ In the last decade, worldwide biofuel production has increased five-fold.⁵⁸ In the US between 2000–2012, ethanol production increased by more than 700%.⁵⁹

The stated policy rationales for the RFS are to improve US energy security, to improve rural (US) economies, and to reduce GHG emissions.⁶⁰ Furthermore, biofuels are promoted as burning cleaner, thus enhancing the

50. *Id.* at 4.

51. *Sources of Greenhouse Gas Emissions*, U.S. ENVTL. PROT. AGENCY, <http://www.epa.gov/climatechange/ghgemissions/sources.html> (last updated June 14, 2012).

52. U.S. DEP'T OF TRANSP., TRANSPORTATION'S ROLE IN REDUCING U.S. GREENHOUSE GAS EMISSIONS ES-2 (2010), *available at* http://ntl.bts.gov/lib/32000/32700/32779/DOT_Climate_Change_Report_-_April_2010_-_Volume_1_and_2.pdf.

53. Regulation of Fuels and Fuel Additives: Renewable Fuel Standard Program, 72 Fed. Reg. 23,900, 23,903 (May 1, 2007) (to be codified at 40 C.F.R. pt. 80).

54. Regulation of Fuels and Fuel Additives; Changes to Renewable Fuel Standard; 75 Fed. Reg. 14,670, 14,673 (Mar. 26, 2010) (to be codified at 40 C.F.R. pt. 80) [hereinafter RFS2 Final Rule/Renewable Fuel Standard 2"].

55. 42 U.S.C. § 7545(o)(2)(B)(i)(I) (2010). For a history of the RFS in US Law, see Timothy A. Slating & Jay P. Kesan, *The Renewable Fuel Standard 3.0?: Moving Forward with the Federal Biofuel Mandate*, 20 N.Y.U. ENVTL. L.J. 374, 417 (2014).

56. Slating & Kesan, *supra* note 55, at 387–88.

57. *World Fuel Ethanol Production*, RENEWABLE FUELS ASS'N, <http://ethanolrfa.org/pages/World-Fuel-Ethanol-Production> (last visited Feb. 23, 2014).; Stephen Rattner, *The Great Corn Con*, N.Y. TIMES (June 24, 2011), <http://www.nytimes.com/2011/06/25/opinion/25Rattner.html>.

58. NICOLE CONDON, HEATHER KLEMICK & ANN WOLVERTON, IMPACTS OF ETHANOL POLICY ON CORN PRICES: A REVIEW AND META-ANALYSIS OF RECENT EVIDENCE 3 (2013) (presentation at Agricultural & Applied Economics Association's 2013 AAEA & CAES Joint Annual Meeting, Washington, D.C., August 4–6, 2013), *available at* http://ageconsearch.umn.edu/bitstream/149940/2/Corn%20Ethanol%20and%20Food%20Prices%202013%20AAEA_subm%20ission.pdf.

59. CONDON ET AL., *supra* note 58, at 5.

60. Slating & Kesan, *supra* note 55, at 398–99.

quality of US air, as mandated by the 1990 Amendments to the US Clean Air Act.⁶¹ Congress was attentive to ward off any adverse, unintended consequences to the economy or ecology of the US⁶², and EPA has clarified it can only grant a waiver if the RFS is to impact the economy of a region, state, or our entire nation.⁶³

Neither Congress nor EPA has attended to potential or realized adverse consequences to economies or ecologies beyond the US borders. Neither, for that matter, do many mainstream environmental critiques of the RFS. These emphasize ancillary environmental impacts of the RFS—especially failure to do life cycle accounting for GHGs, and failure to account for indirect land use changes⁶⁴—but pay scant attention to the out of sight/out of mind environmental injustices of RFS domestic mandates.

Critics allege that biofuels mandates do little to reduce GHG emissions, and may even emit more GHGs than conventional fuels.⁶⁵ For example, in Congressional Testimony, Scott Faber of the Environmental Working Group cites studies that corn ethanol emits 28% more GHGs than the equivalent amount of traditional gasoline.⁶⁶ In Brazil, which decades ago made a commitment to energy self-sufficiency through biofuels⁶⁷, sugar cane is cheaper and produces more GHG savings; however, few locations in the US can grow sugar cane.⁶⁸ Whatever its GHG reducing potential, huge federal subsidies lead to a cost of \$750/ton of CO₂ reductions, which makes little economic sense, given other, cheaper means of reducing CO₂.⁶⁹

Revisions of the US RFS now mandate a lifecycle analysis for GHG emissions, giving a more accurate picture of true GHG savings.

61. *See id.* at 19.

62. *See* 42 U.S.C. § 7545(o)(7)(A).

63. *See, e.g., id.*; Notice of Decision Regarding the State of Texas Request for a Waiver of a Portion of the Renewable Fuel Standard, 73 Fed. Reg. 47,168, 47,172 (Aug. 13, 2008); Notice of Decision Regarding Requests for a Waiver of the Renewable Fuel Standard, 77 Fed. Reg. 70,752 (Nov. 27, 2012).

64. *See, e.g.,* THE UNINTENDED ENVIRONMENTAL IMPACTS OF THE RENEWABLE FUELS STANDARD, ENVTL. WORKING GROUP (Aug 29, 2008), *available at* <http://static.ewg.org/reports/2008/rfs/0820RFfactsheet.pdf>.

65. *See, e.g.,* Rattner, *supra* note 57.

66. Only at the end of his testimony does Mr. Faber refer to food insecurity “around the globe.” *See* Scott Faber, Testimony before the Subcommittee on Energy and Power of the House Committee on Energy and Commerce on Overview of the Renewable Fuel Standard (July 24 2013), *available at* <http://www.ewg.org/testimony-official-correspondence/overview-renewable-fuel-standard-stakeholder-perspectives>.

67. Erik Bluemel, *Biomass Energy: Ensuring Sustainability Through Conditioned Economic Incentives*, 19 GEO. INT’L ENVTL. L. REV. 673, 678–79 (2007).

68. *See* Slating & Kesan, *supra* note 55, at 383.

69. Rattner, *supra* note 57.

Regulators' calculations must include all emissions associated with growing the crop, transporting the crop to production and fueling facilities, converting the crop to ethanol, and indirect land use changes that might result from biofuel production.⁷⁰ Renewable fuels produced in facilities that began construction after December 19, 2007 must reduce GHG emissions at least 20% compared to baseline lifecycle GHG emissions.⁷¹

It is beyond the scope of this paper to evaluate whether or not biofuels meet the GHG reducing benefits its backers claim, or actually exacerbate the problem.⁷² But it does seem likely that fulfilling the demands of EU and US biofuels mandates is causing massive international environmental injustice in distant lands to fulfill a (possibly) well-intentioned GHG reduction mandate that will do little to reduce GHG emissions and may even increase them while at the same time allowing Northern overconsumption to continue unabated.

ACCOUNTING FOR INJUSTICE

As noted above, crops to supply biofuels mandates have to be grown somewhere, and that somewhere is often in climate change mandate havens in the global South. It is difficult to know how much acreage biofuels have usurped: attempting to directly tie biofuels mandates to land clearing or food insecurity in the global South is methodologically cumbersome.⁷³ CIFOR estimates that 2.3% of global agricultural land is dedicated to producing crops for biofuels; some estimates of up to 36% of land by 2030 will be required for biofuel production.⁷⁴ Soybeans used to produce biofuel in Mato Grosso, Brazil account for up to 5.9% of deforestation in the last few years in addition to increasing tensions for who can control the land, indigenous people working in Brazilian biofuel fields confront labor abuses.⁷⁵ Brazil is also attracting major corporate investors in oil palms to produce biofuels.⁷⁶ Oil palm for biofuels resulted in 2.8%–6.5% of

70. 42 U.S.C. § 7545(o)(1)(H) (2010).

71. 42 U.S.C. § 7545(o)(2)(A)(i) (2010).

72. See Timothy Searchinger et al., *Use of U.S. Croplands for Biofuels Increases Greenhouse Gases Through Emissions from Land-Use Change*, 319 SCIENCE 1238, 1238–40 (2008).

73. For why it's difficult to link biofuels mandates to precise measurements of deforestation, see Gao et al., *supra* note 3, at viii–ix, 2, 6–14, 26.

74. *Id.* at 1.

75. *Id.* at ix, 27.

76. JAN WILLEM VAN GELDER & LAURA GERMAN, CIFOR, *BIOFUEL FINANCE: GLOBAL TRENDS IN BIOFUEL FINANCE IN FOREST-RICH COUNTRIES OF ASIA, AFRICA AND LATIN AMERICA AND IMPLICATIONS FOR GOVERNANCE* 3–4 (2011), available at http://www.cifor.org/publications/pdf_files/infobrief/3340-infobrief.pdf.

deforestation in Indonesia and Malaysia.⁷⁷ CIFOR also identifies “emerging jatropha hotspots” that are likely to grow in future years, as the Introduction to this paper suggests.⁷⁸

Indirect land use changes (ILUCs) also occur: People need to eat, and thus when biofuels occupy land currently used to produce food, farmers must subsequently clear land elsewhere to grow displaced crops or graze displaced cattle.⁷⁹ Various studies suggest that these ILUCs dramatically increase the ancillary GHG emissions *caused* by mandates meant to reduce GHGs; these ILUCs will also drive the unjust social consequences of lost food crops and local deforestation.⁸⁰

The Food and Agriculture Organization (FAO) estimates that 16% of citizens of developing countries—or about 850 million people—were undernourished during the years 2007-2009.⁸¹ Condon et al. note that “[f]uture food consumption trends in developing countries are particularly dependent upon how much corn is diverted to non-food uses.⁸² The OECD and FAO report that between 2007–2009, biofuels consumed 20% of sugar cane, 9% of vegetable oil and coarse grains, and 4% of sugar beets grown.⁸³ The US grows more than half of the world’s corn; although much of this goes to feed animals that are slaughtered for food,⁸⁴ increasingly animal or human food crops shift to biofuel cultivation.

It is not clear how much biofuel mandates have led to increasing food prices, and thus contributed to international environmental injustice.⁸⁵ An influential FAO report traces shifts in farming from food to fuel crops, claiming this has increased the prices of food and exacerbated food scarcity in developing countries; farmers in these countries must then either clear more land to meet their food needs, or to meet the growing hunger for

77. Gao et al., *supra* note 3, at ix, 271.

78. *Id.* at 19.

79. *Id.* at 22; TIMO KAPHENGST, ET AL., ECOLOGICAL BRIEFS ON INTERNATIONAL RELATIONS AND SUSTAINABLE DEVELOPMENT 20–21 (2012), available at http://www.ecologic.eu/files/publications/1358406689/kaphengst_12_Ecologic_Brief_Biofuel.pdf; David M. Lapola et al., *Indirect Land-Use Change Can Overcome Carbon Savings from Biofuels in Brazil*, 107 PROC. NAT’L ACAD. SCI. 3388, 3388 (2010).

80. Gao, et al., *supra* note 3, at 24.

81. FOOD & AGRIC. ORG., THE STATE OF FOOD INSECURITY IN THE WORLD 48 (2001), available at <http://www.fao.org/docrep/018/i3434e/i3434e.pdf>.

82. See CONDON ET AL., *supra* note 58, at 2.

83. ACTIONAID, FUEL FOR THOUGHT: ADDRESSING THE SOCIAL IMPACTS OF EU BIOFUELS POLICIES 5 (2012), available at http://www.actionaidusa.org/sites/files/actionaid/fuel_for_thought.pdf.

84. *Economic Research Service: Trade*, U.S. DEP’T OF AGRIC., <http://www.ers.usda.gov/topics/crops/corn/trade.aspx>.

85. Slating & Kesan, *supra* note 55, at 447–448.

biofuels to export.⁸⁶ Ironically, such land clearing may result in overall net increases in GHG emission by releasing the carbon stored in forests and soils.⁸⁷

A comprehensive 2013 meta-analysis concludes that each additional billion gallons of ethanol production results in a 2–3% increase in corn prices over the long run, but a higher 5-10% increase using shorter time frames before markets and citizens adjust to changes in the law (and resulting changes in food supply).⁸⁸ The analysis reviews how other studies connect biofuels mandates to food insecurity, and concludes that whatever the parameters of the various studies, “biofuels expansion will raise the number of people at risk of hunger or in poverty in developing countries.”⁸⁹ Other studies find that global grain prices will increase 16–35% by 2020 due to EU biofuels mandates.⁹⁰

Yet despite this evidence, neither the US nor the EU are paying attention to the distant, unjust results of biofuels mandates, as I will explain in the next section.

SOCIAL IMPACT BIOFUELS MONITORING – OR LACK THEREOF

Whatever the specific parameters of the unjust impacts turn out to be, the EU and the US are paying inadequate attention to the EJ consequences of their biofuels mandates. Scholars sometimes overlook this, as well. For example, in their otherwise thorough analysis of federal biofuel mandates, Timothy Slating and Jay Kesan review and comment on all proposed reforms of US biofuels laws. Nothing in their review hints at any changes that would consider the developing world EJ impacts of biofuel mandates.⁹¹

The US EPA requires “life cycle” analyses of biofuels, but only when assessing GHG emissions and other environmental impacts. For example, in one analysis of feedstock, the EPA states that “[o]ur analysis of land use change GHG emissions includes an assessment of uncertainty that focuses on two aspects of indirect land use change—the types of land converted

86. FOOD & AGRIC. ORG. OF THE U.N., HIGH-LEVEL CONFERENCE ON WORLD FOOD SECURITY: THE CHALLENGES OF CLIMATE CHANGE & BIOENERGY, SOARING FOOD PRICES: FACTS, PERSPECTIVES, IMPACTS, AND ACTIONS REQUIRED 4, 8, 16–31 (2008), *available at* <ftp://ftp.fao.org/docrep/fao/meeting/013/k2414e.pdf>; U.N. ENV'T PROGRAMME, TOWARDS SUSTAINABLE PRODUCTION & USE OF RESOURCES: ASSESSING BIOFUELS 23, 63–64 (2009), *available at* http://www.unep.org/pdf/biofuels/Assessing_Biofuels_Full_Report.pdf [hereinafter UNEP].

87. *Id.* at 67–68.

88. CONDON ET AL., *supra* note 58, at 2.

89. *Id.* at 31.

90. ACTIONAID, *supra* note 83, at 15.

91. Slating & Kesan, *supra* note 55.

and the GHG emissions associated with different types of land converted.”⁹² While EJ impacts are mandated under this Symposium’s celebrated Executive Order 12898 to address Environmental Justice in Minority and Low-Income Populations in the US, the EPA’s life cycle assessment simply concludes: “EPA has determined that this rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not affect the level of protection provided to human health or the environment.”⁹³ The EPA does not examine justice impacts beyond US borders.

California’s Global Warming Solutions Act (AB 32) nods to EJ considerations, but those considerations do not extend across national borders.⁹⁴ Regulators must look at “total potential costs and total potential economic and noneconomic benefits of the plan for reducing greenhouse gases to California’s economy, environment, and public health, using the best available economic models, emission estimation techniques, and other scientific methods.”⁹⁵ Clearly that language does not consider anything outside of California. Likewise, I find no mention of extraterritorial justice considerations in any California statute implementing the RPS.⁹⁶

The European Union has paid some attention to international environmental justice issues—but not that much. The EU Renewable Energy Directive, (or “RED”) and the Fuel Quality Directive mandate that EU Member States create national policies promoting biofuels use. The Renewable Energy Directive establishes a “20% target for the overall share of energy from renewable sources and a 10% target for energy from renewable sources in transport”⁹⁷ The 20% target for renewable sources distinguishes between member states based on previous capacity for renewables, but each state must meet the 10% target for transport.⁹⁸ The 10% transport target does not per se mandate biofuels use,⁹⁹ allowing the use of alternate energy savings by use of electric vehicles and other means. However, much of the legislation focuses on biofuels as the main

92. Supplemental Determination for Renewable Fuels Produced Under the Final RFS2 Program From Grain Sorghum, 77 Fed. Reg. 74,592, 74,605 (Dec. 17, 2012). This language is repeated verbatim in other rulemakings.

93. *Id.* at 74,603.

94. CAL. HEALTH & SAFETY CODE § 38501(f) (West 2014).

95. CAL. HEALTH & SAFETY CODE § 38561(d) (West 2014).

96. *See* Cal. Exec. Order No. S-06-06; 2002 Cal. Stat. 1078 (introduced under Senate Bill 1078 in 2002 and expanded in 2011, 2011 Cal. Stat. 2).

97. 2002 Cal. Stat. 1078.

98. 2002 Cal. Stat. 1078.

99. Directive 2003/30/EC did mandate biofuel use, but was repealed by the RED. Council Directive 2009/28/EC, 2009 O.J. (L140) 16.

driver of the 10% target.¹⁰⁰

It is difficult to assess the land acreage that may have been cleared or repurposed to fulfill EU (or other national) biofuels requirements. The 2011 Tirana conference of the International Land Coalition defined “land grabbing” as land acquisitions that are in violation of human rights, without prior consent of the preexisting land users, and with no consideration of the social and environmental impacts.¹⁰¹ The NGO ActionAid estimates a total at least 50 million hectares of biofuels land grabs.¹⁰² Another report estimates that 13 to 19 million hectares will be required to fulfill EU biofuels mandates by 2020.¹⁰³ In a report on “[l]and grabs for biofuels driven by EU biofuels policies,” Ecofys, a sustainable energy consulting firm, offered a more sober assessment of 1.8 million hectares currently “grabbed for biofuels,” of which 180,000 hectares derived from EU biofuels mandates.¹⁰⁴ Thus even the most conservative estimates point to extensive diversion of land from crops and forests to biofuels cultivation.

In addition, the aviation industry is now embracing biofuels to avoid price fluctuations from traditional fuels, to promote a greener image to consumers, and to meet EU (and other) GHG reduction mandates.¹⁰⁵ The European Advanced Biofuel Flightpath joins the European Commission with airlines including KLM and Lufthansa to make available 2.5 billion liters of aviation biofuel by 2020; this is over and above that required by the EU RED. Experts estimate this would require 3.5 million hectares of land.¹⁰⁶ To meet a stated 2050 target would take 13.6 million barrels of biofuel each day which is nearly all the biofuels for all uses predicted to be available at that time.¹⁰⁷ The controversial EU Emissions Trading System requires all airplanes flying in and out of EU airports to reduce their GHG emissions; plant based aviation biofuels count as carbon neutral, thus

100. The savings must come from “all forms of transport.” See Council Directive 2009/28/EC art. 3, 2009 O.J. (L140) 16. (emphasis added).

101. Maria C. Rulli et al., *Global Water and Land Grabbing*, 110 PROC. NAT’L ACAD. SCI. 892, 892 (2013).

102. CARLO HAMELINCK, ECOFYS, LAND GRABS FOR BIOFUELS DRIVEN BY EU BIOFUELS POLICIES 10 (2013), available at <http://www.ecofys.com/files/files/ecofys-2013-report-on-land-grabbing-for-biofuels.pdf>. See also ACTIONAID, *supra* note 83, at 1.

103. UK RENEWABLE FUELS AGENCY, THE GALLAGHER REVIEW OF THE INDIRECT EFFECTS OF BIOFUELS PRODUCTION 32 (2008).

104. HAMELINCK, *supra* note 102, at iv.

105. See OAKLAND INSTITUTE, ECO-SKIES: THE GLOBAL RUSH FOR AVIATION BIOFUEL 16 (2013), available at http://www.oaklandinstitute.org/sites/oaklandinstitute.org/files/OI_Report_Eco-Skies.pdf [hereinafter *Eco-Skies*].

106. FRIENDS OF THE EARTH EUROPE, FLYING IN THE FACE OF FACTS: GREENWASHING THE AVIATION INDUSTRY WITH BIOFUELS 9 (2011).

107. For an overview, see *Eco-Skies*, *supra* note 105, at 16.

further incentivizing biofuels cultivation for aviation.¹⁰⁸

Even at the low end of the estimates of acreage required to fulfill biofuel mandates, acquiring land can have devastating effects on local communities in the developing world, causing land dispossession, food insecurity, water depletion and abusive labor practices.¹⁰⁹ ActionAid provides bleak case studies of ruined lives and broken promises in Kenya, Tanzania, and Guatemala from plantations meant to export crops for biofuels to the EU.¹¹⁰ For example, in Kenya, an Italian company seeking to grow *jatropha* tried to lease 50,000 ha, potentially displacing 20,000 people, but the communities managed to oust the company.¹¹¹ In Guatemala, the national army evicted hundreds of families to make way for a sugar plantation to fuel the EU biofuels market.¹¹² In Tanzania, a British company convinced communities to give up collective rights to land they used to farm, graze livestock and harvest forest products. When the subsequent corporate biofuels venture went bankrupt, the community was left poorer and had lost their traditional land rights; security guards block their access to their traditional lands.¹¹³

Some developing nations are implementing policies to govern biofuels land grabs. For example, nine African nations have instituted specific policies, and 14 others are developing policies.¹¹⁴ Implementing and enforcing those policies may be difficult, given the many challenges facing these nations, and given the comparative strength of transnational actors driven by a strong profit motive. As I will discuss in the next section, Northern nations must pay greater attention to EJ impacts when writing and implementing biofuel laws.

108. *Biofuels are Essential to Reducing EU ETS Carbon Costs and Meeting Carbon-Neutral Growth Goals, Says Report*, GREENAIRONLINE (Feb. 16, 2010), <http://www.greenaironline.com/news.php?viewStory=1135>.

109. *Consolidated RSB EU Red Principles & Criteria for Sustainable Biofuel Production*, Roundtable on Sustainable Biofuels at 24, available at <http://rsbservices.org/wordpress/wp-content/uploads/2012/10/RSB-PC-V2.pdf>. See also generally OXFAM INT'L, LAND AND POWER: THE GROWING SCANDAL SURROUNDING THE NEW WAVE OF INVESTMENTS IN LAND (2011).

110. ACTIONAID, *supra* note 83, at 7–9.

111. See *id.* at 25.

112. See *id.* at 27.

113. OAKLAND INSTITUTE, TANZANIAN VILLAGERS PAY FOR SUN BIOFUELS INVESTMENT DISASTER, LAND DEAL BRIEF 1 (2012).

114. HAMELINCK, *supra* note 102, at 11.

CRITERIA FOR JUSTICE IN BIOFUELS MANDATE HAVENS

The EU calls for “sustainability” criteria when implementing biofuels mandates, but has named little in the way of specific social or environmental criteria. Member nations are encouraged, though not required, to enter into agreements with non-EU nations regarding oversight of the sustainability criteria.¹¹⁵ The EU’s official Directive expresses concern over the growing need for agricultural commodities and warns against “net increase in cropped area” for biofuels; but the concern is expressed in the context of unaccounted for GHG increases, and does not express similar concern for social dislocations.¹¹⁶ The Directive’s articles pertaining to sustainability are primarily concerned with maintaining ecological sustainability, but do refer in passing to a required biennial report that includes, *inter alia*, “the impact of Community biofuel policy on the availability of foodstuffs at affordable prices, in particular for people living in developing countries, and wider development issues. Reports shall address the respect of land-use rights. They shall state, both for third countries and Member States that are a significant source of raw material for biofuel consumed within the Community whether the country has ratified and Implemented” a list of ILO Conventions, as well as the Cartagena Protocol on Biosafety and Convention on International Trade in Endangered Species.¹¹⁷

The criteria do specify that biodiverse lands should not be converted to growing biofuels crops:

The increasing worldwide demand for biofuels and bioliquids, and the incentives for their use provided for in this Directive, should not have the effect of encouraging the destruction of biodiverse lands. Those finite resources, recognised in various international instruments to be of value to all mankind, should be preserved. Consumers in the Community would, in addition, find it morally unacceptable that their increased use of biofuels and bioliquids could have the effect of destroying biodiverse lands. For these reasons, it is necessary to provide sustainability criteria ensuring that biofuels and bioliquids can qualify for the incentives only when it can be guaranteed that they do not originate in biodiverse areas or, in the case of areas designated for nature protection purposes or for the protection of rare, threatened or endangered ecosystems or species, the relevant competent authority demonstrates that the production of the raw material does not

115. Council Directive 2009/28/EC, art. 18, 2009 O.J. (L140) 16.

116. Council Directive 2009/28/EC, 2009 O.J. (L140) 16.

117. *Id.*

interfere with those purposes.¹¹⁸

It might be morally unacceptable to destroy biodiverse lands (a sentiment with which I agree), but moral unacceptability does not yet extend explicitly to the social implications of biofuels mandates. Even here, the concern is for nonhuman lives, and not the humans that co-depend upon the land.

The European Commission's (EC) own required biennial 2012 progress report includes the social sustainability report required by article 17(7) of the RED, but devotes little analysis to this issue.¹¹⁹ The Report estimates that 2.4 million hectares were used for feedstock crops outside the EU to meet 2010 biofuels use. 60% of the feedstock for biofuels are grown in the EU, with Argentina, Indonesia, Brazil, the US, and others supplying the rest.¹²⁰ Argentina, Indonesia, Malaysia, China, and the US were the top biodiesel providers.¹²¹

The progress report devotes a total of one paragraph to "social sustainability," concluding that "it is not yet clear if EU biofuels demand contributes any abuse of land rights." But noting that recent years have seen global food prices increase, "Commission and Member States' monitoring of this issue must, however, continue."¹²² The EC notes that while most countries producing the fuels have ratified labor and other conventions noted in Article 17, enforcement is lax.¹²³ The Commission hints that "there are some gaps" in biofuel environmental sustainability criteria, but notes that 13 "voluntary schemes" have been approved.¹²⁴ The section also notes that biofuels have created 1.4 million global jobs, but provide no reference for this figure, and does not discuss what or who was displaced when land was converted to biofuels cultivation.¹²⁵ Member States are required to report on fulfillment of the Directive, but few EU member states have attended to the sustainability criteria, and the voluntary schemes¹²⁶ adopted by some member states have lax verification.¹²⁷ For

118. *Id.*

119. RENEWABLE ENERGY PROGRESS REPORT: REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS 11 (2013), available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0175:FIN:EN:PDF>.

120. *Id.* at 15. Feedstock also came from Canada, Ukraine, Malaysia, Paraguay, Russia, China, Switzerland, Peru, Egypt, Guatemala and "other." *Id.* at 11.

121. *Id.* at 11.

122. *Id.* at 11–12.

123. *Id.* at 12.

124. *Id.* at 11–12.

125. *Id.* at 12.

126. Of these voluntary schemes, approved by the EU, few have social criteria, and do not include the most popular ones. KAPHENGST ET AL., *supra* note 79, at 20–21.

example, Germany says little about protections for non-EU land rights, and in its report had no plan to enter into agreements with non-EU nations regarding sustainability and social issues.¹²⁸

The European Parliament is considering amending the biofuels mandate to pay more attention to international EJ. One amendment under consideration proposes that biofuels “shall not be made from land-based raw material unless third parties’ legal rights regarding use and tenure of the land are respected, *inter alia* by obtaining the free prior and informed consent of the third parties, with the involvement of their representative institutions.”¹²⁹ Another Amendment proposes a biennial report “on the impact on social sustainability in the *Union* and in third countries of increased demand for biofuel *on the contribution of biofuel production to reducing the Union’s shortage of vegetable protein and on the impact of Union biofuel policy on the availability of foodstuffs at affordable prices, in particular for people [...] in developing countries, and [...] wider development issues.*”¹³⁰ These requirements have not yet gone into effect; it is not clear that they ever will.

As noted above, various companies have derived voluntary schemes that would help a biofuels operator comply with EU-mandated social sustainability criteria. A study by the World Wildlife Fund suggested that most of the standards approved to certify “sustainability” under the EU RED requirements were not truly sustainable. The “best-performing” scheme was the Roundtable on Sustainable Biomaterials (RSB) standard.¹³¹ Indeed, RSB has the most aggressive social sustainability criteria of

127. COMMISSION STAFF WORKING DOCUMENT: REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL 17 (2013), *available at* <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SWD:2013:0102:FIN:EN:PDF>.

128. FEDERAL REPUBLIC OF GERMANY, NATIONALER AKTIONSPLAN FÜR ERNEUERBARE ENERGIE GEMÄß DER RICHTLINIE 2009/28/EG ZUR FÖRDERUNG DER NUTZUNG VON ENERGIE AUS ERNEUERBAREN QUELLEN [NATIONAL RENEWABLE ENERGY ACTION PLAN IN ACCORDANCE WITH DIRECTIVE 2009/28/EC ON THE PROMOTION OF THE USE OF ENERGY FROM RENEWABLE SOURCES] 63 (2010), *available at* http://ec.europa.eu/energy/renewables/action_plan_en.htm.

129. Amendment 49 to Proposal for a Directive of the European Parliament and of the Council amending Directive 98/70/EC (2013) COM (2012) 0595 (Sept. 11, 2013), *available at* <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2013-0357+0+DOC+XML+V0//EN&language=EN> Commission.

130. Amendment 50 to Proposal for a Directive of the European Parliament and of the Council amending Directive 98/70/EC (2013) COM (2012) 0595 (Sept. 11, 2013), *available at* <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P7-TA-2013-0357+0+DOC+XML+V0//EN&language=EN> Commission (italics and ellipses in the original).

131. *Europe’s Biofuels Not Guaranteed Sustainable, Finds New Study*, WWF (Nov. 28, 2013), http://wwf.panda.org/what_we_do/footprint/climate_carbon_energy/energy_solutions22/renewable_energy/sustainable_energy_report/?212777/europes-biofuels-not-guaranteed-sustainable-finds-new-study.

standards that Ecologic, a respected research institute, (and I) reviewed. Several of the acceptable standards had no social sustainability criteria.¹³² Only RSB demands Free, Prior, and Informed Consent to “form the basis for the process to be followed during all stakeholder consultation, which shall be gender sensitive and result in consensus-driven negotiated agreements.”¹³³ Only the RSB standards forbid involuntary resettlement.¹³⁴ RSB also offers the broadest protections for sustaining and enhancing food security, and is the only standard requiring long-term commitments to the community in which a biofuels enterprise operates.¹³⁵

Nonetheless, at the time of a comprehensive examination of EU sustainability schemes in 2012, only one enterprise had chosen RSB (compared, e.g., to 934 that had chosen a single competitor that had much less rigorous social criteria).¹³⁶ This review warns of “the threat for a ‘race to the bottom’ in social requirements,” as entities requiring certification will seek the business with the lowest standards that nonetheless meet the EU’s sustainability requirements.¹³⁷ Paying attention to International EJ when designing domestic policies may, however, price a mandate haven out of the market.¹³⁸

Some might argue that deleterious impacts in the South are simply unintended international EJ consequences of an environmental mandate. How unintended are these consequences, really? When legislators fail to acknowledge the unjust impacts of their laws – even after years of data support findings of injustice – at some point we must consider that governments *intend* to perpetuate injustice. Certainly, for example, the US would require *some* justice criteria, and the EU would require the strictest of the standards that have been proposed (the RSB standard), or something even stricter. Ideally, they would adopt an EU-wide standard that delineates the standard, and any private verifiers would have to meet those standards if a project or a national scheme were to be certified.

132. KAPHENGST ET AL., *supra* note 79, at 19–20.

133. ROUNDTABLE ON SUSTAINABLE BIOFUELS, ENERGY CENTER OF ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE, CONSOLIDATED RSB EU RED PRINCIPLES & CRITERIA FOR SUSTAINABLE BIOFUEL PRODUCTION 9 (2011), *available at* <http://rsbservices.org/wordpress/wp-content/uploads/2012/10/RSB-PC-V2.pdf>. For a review of FPIC, see David Takacs, *supra* note 16.

134. KAPHENGST ET AL., *supra* note 79, at 21; ROUNDTABLE ON SUSTAINABLE BIOFUELS, *supra* note 133, at 30.

135. KAPHENGST ET AL., *supra* note 79, at 21–22; ROUNDTABLE ON SUSTAINABLE BIOFUELS, *supra* note 133, at 9, 17.

136. KAPHENGST ET AL., *supra* note 79, at 20.

137. *Id.* at 24.

138. Takacs, *supra* note 46, at 721; Gloria Gonzalez, *For REDD Proponents, No Regrets Despite Policy, Finance Challenges*, ECOSYSTEMS MARKETPLACE, http://www.ecosystemmarketplace.com/pages/dynamic/article.page.php?page_id=10074§ion=news_articles&eod=1 (Nov. 26, 2013).

Despite protests to the contrary, it is difficult to envision how biofuel cultivation in the developing world can ever promote sustainable development and just lives. Some sources promote biofuels as a win-win-win for all stakeholders. Not only do Northern governments improve their energy security and reduce GHG emissions, but promoters say biofuels cultivation provides a source of jobs and/or income for Southern rural citizens.¹³⁹ Before it went bankrupt, Sun Biofuels, for example, promoted its biofuels ventures that would “bring welfare to what are often disadvantaged communities.”¹⁴⁰

In a Report titled “Rising Global Interest in Farmland: Can it Yield Sustainable and Equitable Benefits?” the World Bank responds with a cautious “yes.” While recognizing that biofuels pose risks to the developing world, the World Bank nonetheless believes with careful attention, biofuels actors can “minimize risks and capitalize on opportunities to contribute to poverty reduction and economic growth, especially in rural areas.”¹⁴¹ The World Bank and others have produced “Principles for Responsible Agricultural Investment that Respect Rights, Livelihoods and Resources.” The seven principles for (as a group of activist organizations describe it, “‘win-win’ land grabbing”):

1. Land and resource rights: Existing rights to land and natural resources are recognised and respected.
2. Food security: Investments do not jeopardise food security, but rather strengthen it.
3. Transparency, good governance and enabling environment: Processes for accessing land and making associated investments are transparent, monitored, and ensure accountability.
4. Consultation and participation: Those materially affected are consulted and agreements from consultations are recorded and enforced.
5. Economic viability and responsible agro-enterprise investing: Projects are viable in every sense, respect the rule of law, reflect industry best practice, and result in durable shared value.
6. Social sustainability: Investments generate desirable social and distributional impacts and do not increase vulnerability.
7. Environmental sustainability: Environmental impacts are quantified and measures taken to encourage sustainable resource use, while

139. See generally OAKLAND INSTITUTE, *supra* note 113, at 5.

140. *Id.* at 5 (Sun Biofuels website no longer active).

141. KLAUS DEININGER ET AL., RISING GLOBAL INTEREST IN FARMLAND: CAN IT YIELD SUSTAINABLE AND EQUITABLE BENEFITS? xxvi (2011), available at http://siteresources.worldbank.org/INTARD/Resources/ESW_Sept7_final_final.pdf.

minimising and mitigating the negative impact.¹⁴²

If operationalized in rigorous, verifiable criteria, these principles might be a good place to start. But should we start at all? A network of international activists representing 130 groups has denounced these principles, asserting that it is unjust to usurp any rural farmlands for food or biofuels.¹⁴³ The UN's Special Rapporteur on the Right to Food called these principles "woefully inadequate;"¹⁴⁴ The World Bank's own researchers could not find examples of win-win results for rural communities as a result of land grabbing.¹⁴⁵

It is conceivable that land grabbing in the South to fulfill Northern biofuel mandates could result in lower GHG emissions – and thus contribute to greater environmental justice through slowing climate change's onset and impacts. But unlike REDD+, whose operations *may* sustain local functioning ecosystems and allow continued usufruct use of forests, cultivating biofuels will inevitably replace farm lands or functioning forests with industrial monocrops. Rural citizens may gain employment, but it will likely be to the expense of their own ability to gather and grow food, to their detriment. Biofuels mandates bring dubious GHG reduction calculations that neglect ILUCs and transport costs, coupled with the current and future appropriation of land and water desperately needed by rural citizens of the global South, coupled with the local pollution that corporate monoculture agriculture brings, as well as alleged harsh labor conditions at energy crop plantations.¹⁴⁶ No amount of sustainability principles—even if rigorously verified on the ground (itself a dubious proposition)—is going to prevent greater environmental injustices stemming from continued ambitious Northern biofuel quotas that require Southern land to fulfill.¹⁴⁷

Unlike REDD+, whose operations *may* sustain local functioning

142. *Principles for Responsible Agricultural Investment (RAI) that Respects Rights, Livelihoods and Resources: Principle 7*, KNOWLEDGE EXCHANGE PLATFORM FOR RAI, <https://www.responsibleagroinvestment.org/node/248> (last visited Feb. 23, 2004).

143. Land Research Action Network, *Stop Land Grabbing Now!! Say NO to the Principles on Responsible Agro-Enterprise Investment Promoted by the World Bank*, LANDACTION.ORG (Apr. 12, 2010), <http://www.landaction.org/spip.php?article499>.

144. Olivier de Schutter, *Responsibly Destroying the World's Peasantry*, PROJECT SYNDICATE (June 4, 2010), <http://www.project-syndicate.org/commentary/deschutter1/English>.

145. Via Campesina et al., *It's Time to Outlaw Land Grabbing, Not to Make it 'Responsible'!*, GRAIN.ORG (Apr. 17, 2011), <http://www.grain.org/article/entries/4227-it-s-time-to-outlaw-land-grabbing-not-to-make-it-responsible>.

146. KAPHENGST ET AL., *supra* note 79, at 7, 20–21.

147. UNESCO estimates that 2% of water used for irrigation is for energy crops. See THE UN WORLD WATER DEVELOPMENT REPORT 3: WATER IN A CHANGING WORLD 10 (2008), *available at* http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/SC/pdf/WWDR3_Facts_and_Figures.pdf.

ecosystems and allow continued usufruct use of forests, biofuels cultivation usually replaces cultivated lands or functioning forests with industrial monocrops. Rural citizens may gain employment, but it will likely be to the expense of their own ability to gather and grow food, to their detriment.

Responding to negative publicity, private companies are taking action to ameliorate injustice. For example, when nearly a quarter million people took part in Oxfam's campaign exhorting food and beverage companies to respect land rights,¹⁴⁸ Coca-Cola declared that "land grabbing is unacceptable." It commits to "third-party social, environmental and human rights assessments" for the top countries from which its sugar cane is supplied and making transparent from which companies and nations its supply chain stems, making it easier for third parties to monitor compliance. As part of its "zero tolerance for land grabbing," Coca-Cola pledges to adhere to the principle of Free, Prior, and Informed Consent, and to commit to 100% sustainable sourcing of cane sugar by 2020.¹⁴⁹

Under the label of the "Sustainable Aviation Fuel Users Group" various airlines representing 32% of fuel demand pledged that "[j]et fuel plant sources should be developed in a manner which is non-competitive with food and where biodiversity impacts are minimized; in addition, the cultivation of those plant sources should not jeopardize water supplies."¹⁵⁰ Furthermore, "development projects should include provisions for outcomes that improve socioeconomic conditions for small-scale farmers who rely on agriculture to feed them and their families, and that do not require the involuntary displacement of local populations."¹⁵¹ The group is working with other organizations to develop standards and promote peer-reviewed research on best practices.¹⁵²

These kinds of commitments should not be merely voluntary; they should be legally mandated, and incorporated into all Northern domestic legislation promoting biofuels.

In the next section on REDD+, I will discuss how forest carbon offsets

148. *The Coca-Cola Company Declares "Zero Tolerance" for Land Grabs in Supply Chain*, OXFAM CAMPAIGNS (Nov. 8, 2013), <http://www.oxfam.org/en/grow/pressroom/pressrelease/2013-11-08/coca-cola-company-declares-zero-tolerance-land-grabs-supply-chain>.

149. *The Coca-Cola Company Commitment: Land Rights and Sugar*, COCA-COLACOMPANY.COM, http://assets.coca-colacompany.com/6b/65/7f0d386040fcb4872fa136_f05c5c/proposal-to-oxfam-on-land-tenure-and-sugar.pdf (last visited Feb. 23, 2013).

150. *Back to Initiatives & Projects List*, INT'L CIVIL AVIATION ORG., <http://www.icao.int/environmental-protection/GFAAF/Pages/Project.aspx?ProjectID=13> (last visited Apr. 6, 2014).

151. Susanne Retka Schill, *Aviation Group Forms to Support Sustainable Biofuels*, BIOMASS MAG., <http://biomassmagazine.com/articles/2077/aviation-group-forms-to-support-sustainable-biofuels>.

152. *Our Commitment to Sustainable Options*, SUSTAINABLE AVIATION FUEL USERS GRP., <http://www.safug.org/safug-pledge/> (last visited Apr. 6, 2014).

may, if done with rigorous attention to rigorous standards, lead to a more environmentally just world. Those social sustainability criteria begin with the recognition that actions taken to reduce Northern GHG footprints must take into account the social impacts of those actions in places otherwise out of sight and mind.

REDD+: CLIMATE CHANGE MANDATE HAVENS
THAT CAN ACTUALLY MAKE FOR A MORE
ENVIRONMENTALLY JUST WORLD – OR NOT

Programs in Reducing Emissions from Deforestation and forest Degradation—or REDD+—present another example of potential climate change mandate havens. REDD+ programs have attracted over \$5 billion dollars in pledged or spent funds from the United Nations, international financial institutions, companies looking for GHG offsets, national and subnational governments, environmental and social welfare NGOs, and private citizens.¹⁵³ In a REDD+ project or program, an individual landowner, local community, private developer, or government entity reforests degraded land or pledges to preserve a forest that would otherwise be felled.¹⁵⁴ They may then sell the sequestered carbon for a contracted period of time to entities that want to offset their GHG emissions (either because they are legally mandated to do so or they are voluntarily reducing their climate change footprint) or simply wants to fund forest preservation.¹⁵⁵ REDD+ happens on a project-by-project basis, where a developer contracts with landowners to preserve or reforest land, and sells the stored carbon. Alternatively, nations, states, or provinces implement REDD+ on a broader, “jurisdictional” scale, i.e., they use REDD+ funds to reduce deforestation or promote reforestation in a broad geographic area, resulting in greater stored carbon than would have occurred absent the

153. See MOLLY PETERS-STANLEY ET AL., FOREST TRENDS INITIATIVE, COVERING NEW GROUND: STATE OF THE FOREST CARBON MARKETS 2013 vii (2013), available at <http://www.forest-trends.org/documents/files/SOFCM-full-report.pdf>; see also ANNA CREED, THE PRINCE'S RAINFORESTS PROJECT, EMERGENCY FINANCE FOR TROPICAL FORESTS: TWO YEARS ON: IS INTERIM REDD+ FINANCE BEING DELIVERED AS NEEDED? 7–10 (2011), available at http://www.pcfisu.org/wp-content/uploads/2011/11/Two-years-on_Is-interim-REDD+-Finance-being-delivered-as-needed.pdf.

154. Lisa Hayden, *So What is REDD, Anyway?*, PLANET CHANGE (Dec. 8, 2010), <http://change.nature.org/2010/12/08/so-what-is-redd-anyway/>. Also falling under REDD+'s aegis: programs to improve forest management, improve agriculture to retain soil carbon, and preserve peatlands. *About REDD+*, UN-REDD PROGRAMME, <http://www.un-redd.org/AboutREDD/tabid/102614/Default.aspx> (last visited Feb. 23, 2013). See generally CREED, *supra* note 153; PETERS-STANLEY ET AL., *supra* note 153.

155. See David J. Kelly, *The Case for Social Safeguards in a Post-2012 Agreement on REDD*, 6 L. ENV'T & DEV. J. 61, 67 (2010); see also TAKACS, *supra* note 17, at 10.

funding.¹⁵⁶

Terrestrial plants absorb about a quarter of the CO₂ that humans emit; deforestation accounts for somewhere between 15-32% of GHG emissions.¹⁵⁷ REDD+ mitigates climate change when trees retain carbon that deforestation or forest degradation would otherwise release. Furthermore, preserving forests helps preserve the planet's dwindling supply of fully functioning ecosystems that support a trove of biodiversity.¹⁵⁸

REDD+ *may* greatly contribute to a deeply equitable world; it offers a chance to institute legal reforms that preserve the planet's biodiversity, mitigate the planet's human poverty, and innovate the way developed and developing nations incentivize sound methods of sustainable living for a sustainable planet. Intact forests help rural communities adapt to climate change by sustaining ecosystem services that purify water, increase rainfall, prevent erosion, buffer floods, and harbor crop pollinators.¹⁵⁹ REDD+ may

156. For an overview of California's possible REDD+ offsets program, reference REDD OFFSET WORKING GROUP, CALIFORNIA, ACRE AND CHIAPAS: PARTNERING TO REDUCE EMISSIONS FROM TROPICAL DEFORESTATION (Evan Johnson ed., 2013), *available at* <http://greentechleadership.org/documents/2013/07/row-final-recommendations-2.pdf>; IPAM INTERNATIONAL PROGRAM, ELECTRIC POWER RESEARCH INSTITUTE, OVERVIEW OF SUBNATIONAL PROGRAMS TO REDUCE EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION (REDD) AS PART OF THE GOVERNORS' CLIMATE AND FOREST TASK FORCE 1-1-1-5 (2012), *available at* <http://www.gcftaskforce.org/documents/EPRI.pdf>; SAUNDERS ET AL.; PROFOR, REDUCED EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION: LESSONS FROM A FOREST GOVERNANCE PERSPECTIVE 4 (2008).

157. REDD OFFSET WORKING GROUP *supra* note 156, at 10; CGIAR RESEARCH PROGRAM ON CLIMATE CHANGE, AGRICULTURE AND FOOD SECURITY, BIG FACTS ON CLIMATE CHANGE, AGRICULTURE AND FOOD SECURITY, *available at* <http://ccafs.cgiar.org/bigfacts/global-agriculture-emissions>; Valerie Volcovici, *A Slow Start for the Carbon Credit Market*, N.Y. TIMES (July 24, 2011), <http://www.nytimes.com/2011/07/25/business/energy-environment/a-slow-start-for-the-for-carbon-credit-market.html?pagewanted=all>; KEVIN WATKINS, U.N. DEV. PROGRAMME, HUMAN DEVELOPMENT REPORT 2007/2008: FIGHTING CLIMATE CHANGE: HUMAN SOLIDARITY IN A DIVIDED WORLD 2007 1, 40-41 (2007), *available at* http://hdr.undp.org/sites/default/files/reports/268/hdr_20072008_en_complete.pdf (noting that deforestation accounts for between 11 and 28 percent of total carbon dioxide emissions); American Clean Energy and Security Act, H.R. Res. 2454, 111th Cong. § 752(2) (2009); Gleb Raygorodetsky, *Can REDD Ever Become Green*, OUR WORLD (Aug. 1, 2012), <http://ourworld.unu.edu/en/can-redd-ever-become-green/>; Robert J. Carpenter, *Implementation of Biological Sequestration Offsets in a Carbon Reduction Policy: Answers to Key Questions for a Successful Domestic Offset Program*, 31 ENERGY L.J. 157, 158 (2010).

158. United Nations Framework Convention on Climate Change, Nov. 28-Dec. 11, 2011, *Outcome of the Work of the Ad Hoc Working Group on Long-Term Cooperative Action Under the Convention*, U.N. Doc. FCCC/CP/2011/9/Add.1 14-15 (Mar. 15, 2011).

159. VALERIE CAPOS ET AL., U.N. ENVTL. PROGRAMME, REDUCING EMISSIONS FROM DEFORESTATION: A KEY OPPORTUNITY FOR ATTAINING MULTIPLE BENEFITS 9-10 (2007); Stefano Pagiola et al., *Market-Based Mechanisms for Forest Conservation and Development* in SELLING FOREST ENVIRONMENTAL SERVICES: MARKET-BASED MECHANISMS FOR CONSERVATION AND DEVELOPMENT 2 (Stefano Pagiola et al. eds., 2002); David Freestone, *Foreword* to CLIMATE CHANGE

also provide new sources of income and stability through direct payments for preserving forests, and by teaching new forestry-related skills,¹⁶⁰ or by providing for more secure, formal land title.¹⁶¹ REDD+ may promote greater institutional adaptation through enhanced democratic participation as community leaders, landowners, and local government officials develop and manage REDD+ projects and hone skills and institutions to negotiate effectively with project developers and government functionaries.¹⁶²

However, REDD+, if done poorly—i.e. if project managers do not focus on EJ—may exacerbate environmental injustice. I have criticized REDD+, analyzing the injustices wrought by early projects, enumerating equitable principles for REDD+ that are difficult to achieve, and describing

AND FORESTS: EMERGING POLICY AND MARKET OPPORTUNITIES ix, xii (Charlotte Streck et al. eds., 2008); THE CERSPA INITIATIVE, CERTIFIED EMISSIONS REDUCTION SALE AND PURCHASE AGREEMENT GUIDANCE DOCUMENT (2009), available at <http://www.cerspa.com>.

160. See Richard Tipper, *Helping Indigenous Farmers to Participate in the International Market for Carbon Services: The Case of Scolel Té*, in SELLING FOREST ENVIRONMENTAL SERVICES: MARKET-BASED MECHANISMS FOR CONSERVATION AND DEVELOPMENT 223, 232 (Stefano Pagiola et al. eds., 2002); Margaret Skutsch et al., *Alternative Models for Carbon Payments to Communities under REDD+: A Comparison Using the Polis Model of Actor Inducements*, 14 ENVTL. SCI. & POL'Y 140, 143 (2011); Promode Kant, *REDD Should Create Jobs, Not Merely Bring Compensation* 3 (Inst. of Green Econ., Working Paper No. 13, 2010), available at http://www.igrec.in/REDD_should_create_Jobs_Not_merely_bring_compensation.pdf; *International Workshop in Mexico Explores the Role of Local Communities in REDD+ MRV*, FOREST CARBON PARTNERSHIP FACILITY, <http://www.forestcarbonpartnership.org/international-workshop-mexico-explores-role-local-communities-redd-mrv> (last visited Feb. 24, 2014).

161. See TAKACS, *supra* note 17, at 53–57; Ashwini Chhatre et al., *Social Safeguards and Co-Benefits in REDD+: A Review of the Adjacent Possible*, 4 CURRENT OPINION IN ENVTL. SUSTAINABILITY 654, 655 (2012) (suggesting that increased land security for local communities, combined with effective participation in land management, can prevent adverse social impacts of REDD+ and better achieve environmental and climate objectives); see KATOOMBA GROUP ET AL., PAYMENTS FOR ECOSYSTEM SERVICES: GETTING STARTED 10 (2008), available at <http://www.katoombagroup.org/documents/publications/GettingStarted.pdf>; WILLIAM D. SUNDERLIN ET AL., RIGHTS & RES. INITIATIVE, FROM EXCLUSION TO OWNERSHIP? CHALLENGES AND OPPORTUNITIES IN ADVANCING FOREST TENURE REFORM 29–30 (2008) (noting that community based land ownership can prevent land appropriation by outside developers); Carina Bracer et al., *Organization and Governance for Fostering Pro-Poor Compensation for Environmental Services* 35–36 (World Agroforestry Ctr., Working Paper No. 39, 2007), available at <http://www.worldagroforestry.org/downloads/publications/PDFs/wp14961.pdf>; Julian Quan & Nat Dyer, *Climate Change and Land Tenure: The Implications of Climate Change for Land Tenure and Land Policy* 52 (Int'l Inst. for Env't & Dev. and Natural Res. Inst., Univ. of Greenwich, Land Tenure Working Paper No. 2, 2008), available at <ftp://ftp.fao.org/docrep/fao/011/aj332e/aj332e00.pdf>.

162. Chhatre et al., *supra* note 161, at 657; Patricia Nelson, *An African Dimension to the Clean Development Mechanism: Finding a Path to Sustainable Development in the Energy Sector*, 32 DENV. J. INT'L. L. & POL'Y 615, 623 (2004) (discussing how sustainable development is considered by Africans to necessitate institutionalization of balanced growth practices); Alfred Oforu-Ahenkorah, *CDM Participation and Credit Pricing in Africa*, in EQUAL EXCHANGE: DETERMINING A FAIR PRICE FOR CARBON 127, 133 (Glenn Hodes & Sami Kamel eds., 2007), available at <http://cd4cdm.org/Publications/Perspectives/FairPriceCarbon.pdf>.

the formidable set of legal issues for allocating forest carbon as property.¹⁶³ REDD+ may fail to mitigate global climate change, and instead may violate human rights, undercut democracy, and may create a pressure valve that permits developed citizens' unjust, GHG-polluting habits to go unabated, allowing the already rich (mostly in the global North) to assuage their consciences and actually profit at the expense of the poor (in the global South) they are allegedly aiding.¹⁶⁴ At the same time, REDD+ may exacerbate inequities as it exacts high opportunity costs: local people and national governments may be barred from using forests to generate profits (e.g. through logging) or to sustain local communities (e.g. through conversion to agricultural land or harvesting trees for building material).¹⁶⁵

Yes, REDD+ can be criticized on multiple levels, not least of which it is a neoliberal response to an ethical/equity problem, and not least is that it is a top down set of laws and policies promulgated in the global North, based upon Northern laws and notions of contract and property. Nonetheless, it does have important lessons to teach us – both cautionary tales, and ways forward to how to account for EJ issues that intentionally or unintentionally arise from domestic responses to environmental degradation. But developing nations are not suddenly going to set the procedural or substantive terms of the agenda, and the North isn't going to suddenly own up to its culpability for polluting the global atmospheric commons and stop polluting and/or pay reparations for its depredations.¹⁶⁶ Given that we have invested and continue to invest billions of dollars in REDD+, we can tilt at windmills or we can engage with what is really happening in the world.

And, as noted above, REDD+ is happening. Because of its potentially enormous synergistic benefits, REDD+ has numerous, diverse supporters.¹⁶⁷ REDD+'s success depends on how effectively it is

163. See David Takacs, *Carbon into Gold: Forest Carbon Offsets, Climate Change Adaptation, and International Law*, 15 HASTINGS W.-NW J. ENVTL. L. & POL'Y 39, 84–87 (2009); David Takacs, *supra* note 9, at 523 (2010); TAKACS, *supra* note 17, at 5, 7.

164. DURBAN GRP. FOR CLIMATE JUSTICE, NO REDD! NO REDD PLUS!: GLOBAL SIGN-ON CAMPAIGN AGAINST SCHEMES FOR REDUCING EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION (2010), available at http://www.durbanclimatejustice.org/wp-content/uploads/2010/04/durbanREDDstatement_en.pdf; Jesse Ribot & Anne M. Larson, *Reducing REDD Risks*, 6 INT'L J. OF THE COMMONS 233, 233–35 (2012).

165. Chhatre et al., *supra* note 161, at 657; REDD-NET, MARKET AND NON-MARKET COSTS OF REDD+ PERCEIVED BY LOCAL COMMUNITIES: A CASE STUDY IN EAST CAMBODIA 3 (2011), available at <http://redd-net.org/files/case%20study%205%20-%20cambodia%20Alice%20final.pdf>.

166. For a review of the paradigm differences in how North and South view aid, see Takacs, *supra* note 46, at 719–27.

167. Peter J. Kanowski et al., *Implementing REDD+: Lessons from Analysis of Forest Governance*, 14 ENVTL. SCI. & POL'Y 111, 112 (2011); Takacs, *supra* note 163, at 60–61; James

incorporated into future UNFCCC agreements, and on whether Northern jurisdictions begin to accept REDD+ offsets to fulfill compliance requirements. But whether REDD+ goes boom or bust is not the relevant point for this paper – the point is the way decision makers, often in the private sector or NGO sector, are attempting to mainline EJ principles into the required criteria for certification. Of course, it may also be that adhering to these principles may itself be contributing to REDD+'s uncertain future: The care stakeholders must invest to attend to EJ will make REDD+ more expensive. But if it is too expensive to incorporate justice into offsets, perhaps that means no regulatory race to the bottom, and nations and industrial entities will have to clean up their own messes. On the other hand, REDD+'s failure would also mean a failure to transfer billions of dollars from North to South while at the same time losing crucial opportunities to preserve the ecological matrix required by local communities in the global South, even more crucial as a resilience strategy for coming climate change.

In my experience, both opponents and proponents of REDD+ may be right; it all depends upon how REDD+ is implemented. Above all, if REDD+ is to contribute to greater international EJ – and not exacerbate existing inequities – its stakeholders must pay explicit attention to justice, and must develop tight standards with firm validation and verification that these standards are being met.¹⁶⁸

EJ advocates have objected to perceived climate change mandate havens in principle, and in court. EJ advocates challenged California's AB32 on EJ grounds, alleging that the Scoping Plan to implement AB32 fails to achieve the maximum GHG reductions possible, particularly due to methodological difficulties of the proposed cap and trade system. This challenge ultimately failed.¹⁶⁹ Separately, a coalition of 27 EJ and biodiversity-advocating NGOs signed a letter to Governor Brown arguing that allowing REDD+ to count as compliance-grade offsets is unlikely to help forests, due to methodological concerns.¹⁷⁰ Furthermore, they allege, such allowances will only exacerbate EJ concerns in CA, as it allows

Kanter, *In London's Financial World, Carbon Trading is the New Big Thing*, N.Y. TIMES (July 6, 2007), <http://www.nytimes.com/2007/07/06/business/worldbusiness/06carbon.html>; Valerie Volcovic, *supra* note 157.

168. See Takacs, *supra* note 46, at 717.

169. *Ass'n of Irrigated Residents v. Cal. Air Res. Bd.*, 143 Cal. Rptr. 3d 65 (Cal. Ct. App. 2012).

170. Letter from Greenpeace et al., to Jerry Brown, Governor of California (May 3, 2013), available at <http://www.redd-monitor.org/2013/05/06/greenpeace-friends-of-the-earth-us-sierra-club-california-and-24-other-environmental-organisations-oppose-redd-offsets-in-californias-cap-and-trade-scheme/>.

continued industrial emissions within state borders.¹⁷¹

On the other hand, the REDD Offsets Working Group (ROW) has been working with the State to implement “jurisdictional” REDD+, i.e. devising comprehensive plans to reduce deforestation on a state or province level; their pilot projects are based on a Memorandum of Understanding between California, Chiapas (Mexico) and Acre (Brazil). This “jurisdictional” approach, they argue, allows for more comprehensive, human rights respecting, synergistic, methodologically robust means of implementing REDD+.¹⁷² For example, jurisdictional REDD+ “seek large-scale changes in the rural development model that intensify agricultural yields, re-direct agricultural expansion away from forests and onto lands that have already been cleared, improve the livelihoods of indigenous people and other economically-marginalized rural communities, strengthen and expand networks of forest protected areas, and improve the conservation of soils, water resources, and biodiversity.”¹⁷³

How to ensure that justice-respecting REDD+ actually delivers on its promise? The Climate, Community & Biodiversity Alliance (CCBA) presents the most robust standards that ensure REDD+ will safeguard local communities. A partnership of five NGOs with support from various business interests, the standards aim to “stimulate and promote land management activities that credibly mitigate global climate change, improve the wellbeing and reduce the poverty of local communities, and conserve biodiversity.”¹⁷⁴ The CCBA has a set of standards (updated in December 2013) for project developers to use, and over 130 projects have used the standards.¹⁷⁵ With even greater potential to improve EJ in REDD+, The CCBA has put out “Social & Environmental Standards” to be used on a jurisdictional level: That is to say, rather than assess REDD+ on a project-by-project basis, a state or province or nation uses REDD+ funding to promote reforestation or reduce deforestation resulting in stored CO₂ above a “business as usual” (BAU) baseline.¹⁷⁶ Ecuador, Nepal, the

171. *Id.*

172. REDD OFFSET WORKING GROUP, *supra* note 156, at 10–14.

173. *Id.* at 11.

174. CONSERVATION INTERNATIONAL, CARE, RAINFOREST ALLIANCE, THE NATURE CONSERVANCY, & WILDLIFE CONSERVATION SOCIETY, CCB STANDARDS 1 (3d. ed. 2013), *available at* https://s3.amazonaws.com/CCBA/Third_Edition/CCB_Standards_Third_Edition_December_2013.pdf [hereinafter *CCB Standards*].

175. *Id.* at 3.

176. ELEC. POWER RESEARCH INST., OVERVIEW OF SUBNATIONAL PROGRAMS TO REDUCE EMISSIONS FROM DEFORESTATION AND FOREST DEGRADATION (REDD) AS PART OF THE GOVERNORS' CLIMATE AND FOREST TASK FORCE, 1–5 (2012), *available at* <http://www.gcftaskforce.org/documents/EPRI.pdf>.

Brazilian state of Acre and the Indonesian province of Kalimantan have adopted the standards to govern REDD+.¹⁷⁷

The United Nations Framework Convention on Climate Change (UNFCCC) has named a set of REDD+ safeguards,¹⁷⁸ but these remain broad, non-binding, framework principles. In the absence of a set of functional safeguards (i.e. with enough specificity that all stakeholders can implement them), the CCBA standards are our best model for how to implement REDD+ to achieve greater justice. Many EJ principles are incorporated into these voluntary standards project developers use as they seek certification to conduct REDD+ and sell the resulting carbon credits.¹⁷⁹ While these standards remain voluntary, at some point state of the art soft law standards will become hard law when these standards become entrenched, or too ethically respected to contravene.¹⁸⁰

It is not that voluntary standards are a guaranteed key to unlock international EJ benefits. They don't automatically overcome nations' legal responsibilities to legislate and enforce domestic and international human rights laws.¹⁸¹ It is not clear who enforces the standards should project actors not fulfill their contracted responsibilities.¹⁸² Because these projects are usually carried out and validated by private business interests, one is right to question whether they will prioritize justice when profits are at stake.¹⁸³ Private businesses contract to verify results may be "captured" by their clients, and may be loathe to raise concerns for fear others will not hire them.¹⁸⁴ Carbon businesses may accept such voluntary regulation in order to advertise their corporate social responsibility to consumers, and/or to show that industry can regulate itself, thus obviating the need for more formal legal strictures.¹⁸⁵ Methodological difficulties still abound: For

177. *Country Overview*, REDD STANDARDS, http://www.redd-standards.org/index.php?option=com_content&view=article&id=16&Itemid=19 (last visited Feb. 24, 2014).

178. UNFCCC COP-16 para 72 and app I, para 2. Note the "should" language where "shall" should be if the safeguards were to be binding. CONSERVATION INTERNATIONAL, *supra* note 174, at 1.

179. Eduard Merger et al., *Options for REDD+ Voluntary Certification to Ensure Net GHG Benefits, Poverty Alleviation, Sustainable Management of Forests and Biodiversity Conservation*, 2 *FORESTS* 550, 551–54, tbl. 1 (2011), available at <http://www.mdpi.com/1999-4907/2/2/550>.

180. Kenneth W. Abbott & Duncan Snidal, *Strengthening International Regulation Through Transnational New Governance: Overcoming the Orchestration Deficit*, 42 *VAND. J. TRANSNAT'L L.* 501, 543 (2009).

181. Jason Morrison & Naomi Roht-Arriaza, *Private and Quasi-Private Standard Setting*, in *THE OXFORD HANDBOOK OF INTERNATIONAL ENVIRONMENTAL LAW*, *THE OXFORD HANDBOOK OF INTERNATIONAL LAW* 498, 524 (Bodansky et al. eds., 2007).

182. *Id.* at 526.

183. PETER T. MUCHLINSKI, *MULTINATIONAL ENTERPRISES AND THE LAW* (2007).

184. Takacs, *supra* note 163, at 75–77 (2009).

185. Morrison, *supra* note 181, at 504; Muchlinski, *supra* note 183, at 567.

example how to choose a baseline of predicted deforestation against which you measure the actual deforestation that occurs. And accurate, fair verification of results may still be problematic. But as I examine the criteria in these standards, it strikes me that jurisdictions and project proponents that actually adhered to these standards would fulfill the justice promises of REDD+.

The standards provide excellent principles, which, if realized, would contribute to deeply equitable, justice-serving REDD+. They name not only the principle objectives, but the criteria for delivering the principles, and indicators that provide the information that must be provided to demonstrate compliance with any principle.¹⁸⁶ In their rigor and specificity – not only on social justice safeguards, but on climate and biodiversity benefits—the CCBA standards lend an imprimatur of legitimacy to investors, and result, on average, in higher premiums for carbon credits from projects using the standards.¹⁸⁷

For those looking for a set of standards, which, if realized, would maximize EJ in REDD+, I would point to these justice-serving, overarching principles (all direct quotes):

The REDD+ program recognizes and respects rights to lands, territories, and resources;

The benefits of the REDD+ program are shared equitably among all relevant rights holders and stakeholders;

The REDD+ program improves long-term livelihood security and well-being of Indigenous Peoples and local communities with special attention to women and the most marginalized and/or vulnerable people;

The REDD+ program contributes to good governance, to broader sustainable development and to social justice;

All relevant rights holders and stakeholders participate fully and effectively in the REDD+ program;

The REDD+ program complies with applicable local and national laws and international treaties, conventions and other instruments.¹⁸⁸

The standards seek to minimize environmental burdens and maximize environmental benefits. The standards pay close attention to equitable benefit sharing, and require a transparent process of revealing and

186. REDD+ SOCIAL & ENVIRONMENTAL STANDARDS 5 (2012), available at http://www.redd-standards.org/files/REDDSES_Version_2/REDDSES_Version_2_-_10_September_2012.pdf [hereinafter REDD STANDARDS].

187. *CCB Standards*, *supra* note 174; THE CLIMATE, COMMUNITY, AND BIODIVERSITY ALLIANCE, https://s3.amazonaws.com/CCBA/CCB_Standards_FactSheet.pdf, citing PETERS-STANLEY ET AL., *supra* note 153, at 32.

188. REDD STANDARDS, *supra* note 186, at 8, 11–13, 18, 22.

allocating potential benefits, costs and risks.¹⁸⁹ REDD+ must improve “long-term livelihood security and well-being of indigenous Peoples and local communities with special attention to women and the most marginalized and/or vulnerable people.”¹⁹⁰ The revised standards especially hope to support REDD+ benefits for “smallholder and community led-projects,”¹⁹¹ which have face barriers in accessing REDD+ funds, often due to lack of institutional capacity needed to fulfill REDD+’s complicated guidelines. The standards authors note “the serious risks notably for Indigenous Peoples and local communities, and in particular for marginalized and/or vulnerable social groups within those communities” and aims to allay those risks and provide benefits for all stakeholders.¹⁹²

The promoters of these standards see these as a fundamental building block to help states form their own, durable REDD+ social safeguards¹⁹³ To my eyes, they provide an excellent model for any jurisdiction looking to maximize justice when implementing REDD+.

Furthermore, the standards were derived in an open, participatory manner with extensive input from an array of stakeholders,¹⁹⁴ and include ancillary additional guidance about how to work with multi-stakeholder groups involved with decision-making around social and environmental standards for REDD+.¹⁹⁵ And the standards epitomize current, best practices in Environmental Democracy,¹⁹⁶ they require that “all relevant rights holders and stakeholders participate fully and effectively in the REDD+ program,” that builds upon local knowledge and requires “culturally appropriate, gender sensitive and effective participation.”¹⁹⁷ Furthermore, the standards demand a participatory property mapping process inclusive of women and marginalized and/or vulnerable people; transparent, gender-sensitive, free, prior, and informed consent of Indigenous peoples and any affected local communities, including for permission to us traditional Indigenous knowledge, innovations and

189. *Id.* at 11–12.

190. *Id.* at 12.

191. *CCB Standards*, *supra* note 174, at 4.

192. REDD STANDARDS, *supra* note 186, at 3.

193. *Id.* at 4.

194. *History of the REDD+ SES Initiative*, REDD STANDARDS, http://www.redd-standards.org/index.php?option=com_content&view=article&id=9&Itemid=12 (last visited Feb. 24, 2014).

195. *Information on Multi-Stakeholder Process*, REDD STANDARDS, http://www.redd-standards.org/files/Multistakeholder_-Information-Note-REDD-SES-ENG.pdf (last visited Feb. 24, 2014).

196. For a review, see Takacs, *supra* note 16.

197. REDD STANDARDS, *supra* note 186, at 18–19.

practices; transparent governance and grievance procedures; and capacity building so that all affected stakeholders are able to participate effectively.¹⁹⁸

In the absence of an agreed upon international framework for maximizing international EJ when implementing REDD+, these voluntary standards set the standard. They would certainly provide a fine framework for future UNFCCC, World Bank, or other large-scale implementers or REDD+.

Furthermore, these standards comprise a fine launchpad for those looking to avoid large scale environmental injustices when biofuels requirements lead to unjust climate change mandate havens. It might be that biofuels proponents would be unable to employ these standards successfully. That would not be because the standards are not apt for biofuels— they would adapt quite well to that context. Instead, Northern lawmakers and biofuels business developers might find that they cannot implement biofuels plantations and avoid environmental injustice at the same time.

CONCLUSION

Many nations of the world seek to improve national and international environmental quality, and implement laws to effectuate this goal. Sometimes those laws are implemented with an express intent to ameliorate environmental injustices. This is particularly true for laws meant to reduce GHG emissions and thus mitigate the worst incipient impacts of climate change, which will disproportionately harm world's poorest citizens.

Those laws aiming to slow the onset of climate change should not end up exacerbating the injustices they purport to assuage. Laws promoting biofuel use and programs meant to promote REDD+ may not pay sufficient attention to the justice impacts they impose, and may worsen the condition of already poor citizens in the global South. Just as strict domestic environmental laws in the North may lead to pollution havens in the South, so may Northern GHG reducing laws lead to unjust climate change mandate havens.

US and EU regulations mandating ever increasing percentages of biofuels seem clearly to be causing environmental injustices in the Southern nations growing feedstock to meet these mandates. Northern governments and their citizens are paying insufficient attention to these injustices. Some voluntary standards are emerging, but they pay

198. *Id.* at 8–9, 13, 19–21.

insufficient attention to EJ impacts, and are slow to be adopted. The US has scarcely considered biofuels justice impacts beyond its borders.

REDD+ is making greater progress towards streamlining EJ principles into its implementation. While both biofuels and REDD+ advocates stress the promotion of justice for Southern nations helping to fulfill the mandates, widespread cultivation of biofuels feedstock is going to result in land grabs and difficult labor. On the other hand, REDD+ has vast potential to preserve the ecological matrix essential for rural communities to survive and thrive while potentially transferring billions of dollars of wealth from North to South. While the social and environmental standards discussed here are not panaceas, they do pose an excellent model for mandate havens to become centers of greater EJ in the world.

We should clean up the messes we have made without making bigger messes for those in distant nations, out of sight and out of mind. Strict environmental justice criteria should be developed and implemented to avoid creating unjust mandate havens. Those criteria should be deeply equitable, i.e. they should result in laws and policies that act in synergy to maximize the health and potential of all individuals, communities, and ecosystems.