

Regenerating the Human Right to a Clean and Healthy Environment in the Commons Renaissance

Burns H. Weston*
David A. Bollier**

It is our position that there exists today a human right to a clean and healthy environment,¹ that it is limited in reach but nonetheless part of our legal as well as moral inheritance, and that, at this moment in ecological history especially, it needs to be taken extra seriously. It also is our position that, for this to happen—indeed, for Earth itself to survive hospitably to life upon it—this right must be reimagined and reinvigorated, and as soon as possible. Many times since its inception, but particularly since the globalization of the Industrial Revolution over the past thirty years, the right has been suppressed and compromised, in some instances eclipsed, by powerful economic and political interests that, at home and abroad, have stolen our ecological citizenship. This has occurred, if not by the barrel of the gun, then by a rule of law that has favored “the private [and public] plunder of our common wealth”²—the special over the common interest—and to the detriment of us all, once in a gradual way, now with cataclysmic instantaneity. Think, for example,

* Bessie Dutton Murray Distinguished Professor of Law Emeritus and Senior Scholar, Center for Human Rights, The University of Iowa. With this essay, I salute Michael Reisman of the Yale Law School, my long-time, admired colleague and friend—hopefully to make amends for an intent and circumstance that did not rhyme in time to contribute to the much-deserved *festschrift* honoring him last year: *Looking to the Future: Essays on International Law in Honor of W. Michael Reisman* (Mahnoush H. Arsanjani, et al. eds., 2010). Anyone familiar with Professor Reisman’s brilliant *Law in Brief Encounters* (1999) will understand why I do so here in particular. Additionally, I wish to thank Samuel M. DeGree, my insightful, creative, and gracious research associate to whom I owe much; also Scott O. McKenzie, Suzan M. Pritchett, and Wan-chun Dora Wang, my former research assistants for their always imaginative help at the outset. I am profoundly grateful to all, as I am also to Anne MacKinnon for her early, customarily acute insights; the Harold K. Hochschild Foundation and the Arsenault Family Foundation for their indispensable general support; and to University of Iowa College of Law Dean Gail Agrawal for her financial support of much needed research assistance in the early stages.

** Independent commons scholar and activist, Co-founder of the Commons Strategy Group, Blogger at Bollier.org, and Senior Fellow at the Norman Lear Center, USC Annenberg School for Communication & Journalism. I too would like to thank Samuel M. DeGree for his painstaking and cheerful research support throughout this project; also Anne MacKinnon for her early creative advice. Silke Helfrich and Michel Bauwens have been wonderful friends and colleagues in my study of the commons over the past several years; their ideas and insights are reflected in the pages that follow. I am most grateful as well for the financial support of this project by the Harold K. Hochschild Foundation and the Arsenault Family Foundation.

¹ We use the phrase “clean and healthy environment” to encapsulate the numerous adjectives that, either alone or in various combination, are used to identify or define this right, e.g., “adequate,” “decent,” “ecologically balanced,” “resilient,” “sustainable,” and “viable” in addition to “clean” and “healthy.” In no way, however, should our abbreviated conveniences be interpreted to diminish the right of everyone to an environment that is adequate, decent, ecologically balanced, resilient, sustainable, and viable as well as clean and healthy. Nor should our use of the yet more abbreviated phrases “human right to environment” and “right to environment” be so construed, adopted as they are solely to unburden syntax where needed.

² DAVID BOLLIER, SILENT THEFT—THE PRIVATE PLUNDER OF OUR COMMON WEALTH (2003).

BP's 2010 Deepwater Horizon oil hemorrhage in the Gulf of Mexico.³ To ignore the right to environment, however, or to be deterred by its difficulties or to acquiesce helplessly to its detractors, is to invite extinction. The right to a clean and healthy environment is a critical pathway to a planetary future fit for all living things.

But we get ahead of ourselves. Let us begin at the beginning.

I. Introduction

At least since Rachel Carson's *Silent Spring*,⁴ we have known about humankind's squandering of nonrenewable resources, its wanton killing of precious life species, and its overall contamination and degradation of delicate ecosystems.⁵ In the last decade or so, these defilements, increasingly multidimensional and ubiquitous, have assumed a systemic dimension. Faced with mounting capital surpluses not easily reinvested in ordinary production streams, corporate and other business enterprises, typically with the blessings if not the active partnership of the States with which they are allied, have been making, in anthropologist Donald Nonini's words, "massive incursions . . . across a broad front of heterogeneous areas of material life . . . to 'free up' resources heretofore not accessible for commercialization in order to profitably invest excess capital combined with them in new streams of production"⁶—what David Bollier has aptly called "silent theft" or "the private plunder of our common wealth."⁷

The consequences visited upon our natural environment by this "silent theft," compounded by those visited upon our economic, social, and cultural resources, have been ruinous. Briefly put, the State and Market, in pursuit of commercial development and profit, have failed to internalize the

³ The Deepwater Horizon oil "spill," as it is usually—and revealingly—characterized, is of course but one of a seemingly endless list of ecological delinquencies. Appropriately, it was widely publicized and condemned, though not enough to prevent planning of further Gulf of Mexico drilling less than one year after the disaster. Many, however, escape widespread public notice, let alone responsible scrutiny, as commonly they take place at the hands of artful corporate giants in faraway developing countries, their victims either ignored or treated cavalierly, even with contempt. For noteworthy exception, see Bob Herbert, Op-Ed., *Disaster in the Amazon*, N.Y. TIMES, June 5, 2010, at A21, recounting "what has been described as the largest oil-related environmental catastrophe ever"—Texaco's operation from the early 1960s to 1992 of some 300 oil wells in Ecuador's Amazonian rainforest, fouling rivers and streams with polluting byproduct, contaminating the soils and ground water with toxic waste, poisoning the air and creating "black rain" via the burning of gas and waste oil into the atmosphere, and in the process destroying the lives and culture of the indigenous inhabitants, "upended in ways that have led to widespread misery." See also *infra* note 136 in Section II, briefly describing the adjudicated response to this "catastrophe" by the Inter-American Commission on Human Rights.

⁴ RACHEL CARSON, *SILENT SPRING* (1962). Note also the publication in the same year of Paul Brooks & Joseph Foote, *The Disturbing Story of Project Chariot*, HARPER'S, Apr. 19, 1962, at 60, exposing and ultimately hastening the demise of theoretical physicist Edward Teller's geoengineering plans to detonate nuclear devices with 160 times the explosive power dropped on Hiroshima to create a deep water harbor on Cape Thompson on Alaska's Chukchi Sea coast 30 miles southeast of the Inupiat Eskimo village of Point Hope. "Our ability to alter the earth we live on is . . . appalling," the authors wrote.

⁵ In the United States at least, we in fact have known about the ecological damage that humans have wrought on our planet ever since George Perkins Marsh's *Man and Nature*, originally published in 1864, later republished in 1965 by The Belknap Press of Harvard University Press and again in 2003 by the University of Washington Press. Marsh, born in Woodstock, Vermont, and whose work against clearcut foresting played a role in the creation of the Adirondack Park, is considered by many to have been America's first environmentalist.

⁶ David M. Nonini, *Introduction*, in *THE GLOBAL IDEA OF THE COMMONS* 1, 13 (David M. Nonini, ed. 2007).

⁷ See BOLLIER, *supra* note 2.

environmental and social costs of their pursuits, and, in so failing, have neglected to take measures to preserve or reproduce the very preconditions of capitalist production. The result (among others): pollution and waste (acid rain, hydrocarbon emissions, poisoned waterways, toxic waste dumps); short-term overuse and destruction of natural resources (forests, waterways, fisheries) and the material infrastructures (roads, bridges, harbors) needed for their exploitation; and consequently devalued urban and other human settlements (“brownfields,” suburban sprawl), which especially affect the poor and racial and other minorities. The policies and practices responsible for this state of affairs are of course unsustainable.

But the grim story does not end here. Lately we have come to realize the shocking extent to which our atmospheric emission of carbon dioxide and other greenhouse gases—and consequent global warming and climate change—now exacerbate these practices, imperil attendant human rights on a massive scale, and otherwise threaten Planet Earth to a degree unprecedented since the dinosaurs.⁸

The details are well documented, thanks to the U.N.’s Intergovernmental Panel on Climate Change (IPCC) and other authoritative sources.⁹ In just the next decade or two, with threats of irreversible ecological harm mounting daily via the loss of land, forests, freshwater systems, and biodiversity, but especially via the warming of Earth’s average surface temperature (currently about 15°C, 59°F), we face, at a minimum, an all but certain 2 degrees Celsius (3.6° F) increase in Earth’s average surface temperature, projected to cause significant sea level rises (Greenland tips into irreversible melt when global temperatures rise above only 1.2° Celsius). The warmer atmosphere will provoke, too, a greater incidence of extreme weather; intensified flooding and soil erosion; expanded heat waves, droughts, and fires; the disappearance of life-sustaining glacial flows to major cities; aggravated desertification and crop failures (including Amazonian rain forest depletion and wheat crop losses in northern latitudes); famine in more than half the 54 countries of Africa;

⁸ Bill McKibben, early to sound the alarm about global warming, titled his recent book *EAARTH: MAKING A LIFE ON A TOUGH NEW PLANET* (2010) to signify that already we have created a planet fundamentally different from the one into which most readers of this essay were born. *See also* JAMES LOVELOCK, *THE REVENGE OF GAIA: WHY THE EARTH IS FIGHTING BACK—AND HOW WE CAN STILL SAVE HUMANITY* (2006).

⁹ Most of what follows is based on the findings of the IPCC. Though recently subject to political attack from those would deny or diminish its core findings, it is widely and justifiably considered to be the primary source of scientifically-based information on climate change. Established in 1988 by the World Meteorological Organization (WMO), a specialized agency of the United Nations, and the United Nations Environment Programme (UNEP) to address the trends and risks of climate change, its assessment reports are based on peer reviewed, published scientific findings. Its Fourth Assessment Report, published in 2007, was derived from more than 2,500 scientific experts, 800 contributing authors, and 450 lead authors from over 130 countries. Co-winner (with former U.S. Vice President Al Gore) of the Nobel Peace Prize in 2007, currently the IPCC is working on its Fifth Assessment Report, to be finalized in 2014. Its website (<http://www.ipcc.ch>) provides abundant further information.

Other authoritative sources upon which we have relied include the U.S. Global Change Research Program which, begun in 1989 and as stated on its website (<http://www.globalchange.gov>), “coordinates and integrates federal research on changes in the global environment and their implications for society”; and the Millennium Ecosystem Assessment, called for by former U.N. Secretary-General Kofi Annan in 2000, initiated in 2001, and involving, as announced on its website (<http://www.maweb.org/en/Index.aspx>), “the work of more than 1,360 experts worldwide . . . [in] state-of-the-art scientific appraisal of the condition and trends in the world’s ecosystems and the services they provide . . .” *See also* JAMES HANSEN, *STORMS OF MY GRANDCHILDREN: THE TRUTH ABOUT THE COMING CLIMATE CATASTROPHE* (2009); LOVELOCK, *supra* note 8; MARK LYNAS, *SIX DEGREES: OUR FUTURE ON A HOTTER PLANET* (2008); SIR NICHOLAS STERN, *THE ECONOMICS OF CLIMATE CHANGE: THE STERN REVIEW* (2007) [hereinafter “STERN REVIEW”];

swelling refugees in search of food and water (increasingly in the face of armed resistance); wider spreading of water- and vector-borne diseases; the likely extinction of one-third of all species.

More graphically, Africa is threatened to lose up to 247 million acres of cropland by 2050, equal to the size of all U.S. commodity cropland. The loss of glaciers in the Tibetan Plateau will jeopardize the water supply of 1.5 billion Asians. Entire island nations will confront extinction, their sovereignty swallowed by rising seas—imagine 75 million Pacific islanders swept from their homes into refugee status! Precious indigenous cultures—the Arctic Inuit and Amazonian Kamayurá, for example—will likely wither away, tragically, for lack of food caused by overheated and receding habitats. Desperate people in search of food, water, and safe shelter—e.g., the “environmental refugees” that already are fleeing Kenya’s increasingly drought-stricken Rift Valley—will number as many as 250 million by mid-century, dwarfing the number of “political refugees” that traditionally has strained the world’s caring capacities.

Renowned NASA climatologist James Hansen, among the very first to sound the climate change alarm three decades ago, puts it bluntly: “The crystallizing scientific story reveals an imminent planetary emergency. We are at a planetary tipping point [that is] incompatible with the planet on which civilization developed . . . and to which life is adapted.”¹⁰ Prize-winning British scientist James Lovelock, once a global warming skeptic, puts it this way: “Our future is like that of the passengers on a small pleasure boat sailing quietly above the Niagara Falls, not knowing that the engines are about to fail.”¹¹ In his book *How to Cool the Planet*, Jeff Goodell elaborates:

In Lovelock’s view, it doesn’t matter how many rooftop solar panels we install or how tight we make the cap on greenhouse gas emissions—it’s too late to stop the climate changes that are already under way. And those changes will be far more dramatic than people now suspect. By the end of the century, Lovelock believes, temperate zones such as North America and Europe could heat up by 17 degrees Fahrenheit, nearly double the high-end predictions of most climate scientists. Lovelock believes that this sudden heat and drought will set loose the Four Horseman of the Apocalypse: war, famine, pestilence, and death. By 2100, he told me, the earth’s population could be culled from today’s seven billion to less than one billion, with most of the survivors living in the far latitudes—Canada, Iceland, Norway, and the Arctic basin.¹²

If Hansen and Lovelock are even only half right, the ecological (and social) future bodes ill almost everywhere.

¹⁰ This quotation is a composite of several distinctive but almost identical statements from Hansen’s reports, lectures, and testimonies repeatedly cited on numerous reliable websites. See, e.g., Jim Hansen, *State of the Wild: Perspective of Climatologist*, Apr. 10, 2007, <http://www.davidkabraham.com/Gaia/Hansen%20State%20of%20the%20Wild.pdf> (accessed June 25, 2011); Bill McKibben, *The Carbon Addicts on Capitol Hill*, THE WASHINGTON POST, Mar. 1, 2009, <http://www.washingtonpost.com/wp-dyncontent/article/2009/02/28/AR2009022801667.html> (accessed June 25, 2011) (quoting Hansen); James Hansen et al., *Target Atmospheric CO₂: Where Should Humanity Aim?*, <http://www.columbia.edu/~jeh1/2008/TargetCO220080407.pdf> (accessed June 25, 2011).

¹¹ LOVELOCK, *supra* note 8, at 6.

¹² JEFF GOODELL, *HOW TO COOL THE PLANET—GEOENGINEERING AND THE AUDACIOUS QUEST TO FIX EARTH’S CLIMATE* 89-90 (2010).

How should we respond to these brute facts and projections? Since the early 1970s and especially since the landmark 1972 Stockholm Conference on the Human Environment, literally scores of multilateral treaties designed to protect the environment have been adopted,¹³ including at least forty that deal specifically with resources affected by climate change.¹⁴ Still, naysayers notwithstanding, the environment is everywhere under siege, and the worst polluters—China and the United States leading the pack—remain unable to reach agreement on the curbing of greenhouse gas emissions. In climate change policy circles today, the call to action is no longer the language of “prevention”; it is of “mitigation” and, increasingly, “adaptation”¹⁵—and with little or no regard for those who will be most seriously affected. The Inuits and the sea islanders cry out in vain.

Yet even in this alarming setting we have options—economic, scientific, technological, cultural, legal, etc.¹⁶ It of course is important that we explore and evaluate each of them, and as soon as possible if we are to guarantee against oblivion. None, however, are likely to succeed over the long run if they are, fundamentally, business-as-usual. Warns Øystein Dahle, Chairman of the Board of the World Watch Institute and former Vice President of Exxon Norway:

A great change in our stewardship of the Earth and the life on it is required if vast human misery is to be avoided and our global home on this planet is not to be irretrievably mutilated. * * * The challenge will . . . require a complete redesign of the working relationship between the political system and the corporate sector.¹⁷

James Gustave Speth, former Dean of the Yale School of Forestry and Environmental Studies, now at Vermont Law School, asserts:

The main body of environmental action is carried out within the system as currently designed, but working within the system puts off-limits major efforts to correct many underlying drivers of deterioration, including most of the avenues of change . . . Working only within the system will, in the end, not succeed when what is needed is transformative

¹³ Judging from a 1998 UNESCO publication, there exist today well over 300 multilateral treaties and 900 bilateral treaties dealing with the biosphere alone. See Antonio Augusto Cançado Trindade, *Human Rights and the Environment*, in HUMAN RIGHTS: NEW DIMENSIONS AND CHALLENGES 118 (UNESCO: Janusz Symonides ed., 1998). For many of the multilateral treaties, global and regional, see INTERNATIONAL LAW AND WORLD ORDER: BASIC DOCUMENTS, Titles I-V, especially Title V (“Earth-Space Environment”) (Burns H. Weston & Jonathan C. Carlson eds., 1994–) (hereinafter “BASIC DOCUMENTS” for all five titles).

¹⁴ See, e.g., List of International Environmental Agreements, WIKIPEDIA.ORG http://en.wikipedia.org/wiki/List_of_international_environmental_agreements#Alphabetical_order (accessed June 25, 2011).

¹⁵ See, e.g., MCKIBBEN, *supra* note 8.

¹⁶ See, e.g., LESTER R. BROWN, PLAN B 3.0: MOBILIZING TO SAVE CIVILIZATION (2008); CHARLES DERBER, GREED TO GREEN: SOLVING CLIMATE CHANGE AND REMAKING THE ECONOMY (2010); GOODELL, *supra* note 12; AL GORE, OUR CHOICE: A PLAN TO SOLVE THE CLIMATE CRISIS (2009); BERT METZ, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, WORKING GROUP III, CLIMATE CHANGE 2001: MITIGATION (2001); AUDEN SHENDLER, GETTING GREEN DONE: HARD TRUTHS FROM THE FRONT LINES OF THE SUSTAINABILITY REVOLUTION, ch. 7 (2010).

¹⁷ Øystein Dahle, Board Chairman, Worldwatch Institute, *From Cowboy Economy to Spaceship Economy*, Remarks at AGS Annual Meeting 2004, Chalmers University of Technology, Göteborg, Sweden (Mar. 2004), in ALLIANCE FOR GLOBAL SUSTAINABILITY, PROCEEDINGS: RESEARCH PARTNERSHIPS TOWARDS SUSTAINABILITY 15 (Richard St. Clair, ed., 2004), available also at <http://www.globalsustainability.org/data/AGSAM2004Proceedings.pdf> (accessed June 25, 2011).

change in the system itself. * * * [Needed is] a revitalization of politics through direct citizen participation in governance, through decentralization of decision making, and through a powerful sense of global citizenship, interdependence, and shared responsibility.¹⁸

And David Orr, the Paul Sears Distinguished Professor of Environmental Studies and Politics at Oberlin College, observes:

Like the [US] founding generation, we need a substantial rethinking and reordering of systems of governance that increase public engagement and create the capacities for foresight to avoid future crises and rapid response . . . In the duress ahead, accountability, coordination, fairness, and transparency will be more important than ever.¹⁹

These and many other astute observers are coming to a shared conclusion: the flawed premises of laissez-faire economics (classical and neoliberal) and its attendant legal and political warrants which prioritize territorial sovereignty over shared stewardship of the natural environment, impede our search for systemic, durable change.²⁰ At the same time, however, this moment in history presents an unusual opening in our legal and political culture for introducing new ideas for effective and just environmental protection—locally, nationally, regionally, globally, and points in between.

From a legal perspective, we believe that effective and just environmental protection is best secured via the rigorous application of the human right to environment reconceptualized both to facilitate and, together with other essential rights, to function within a new paradigm of ecological governance that actually could promote environmental well-being while meeting everyone’s basic needs. The paradigm we have in mind is *commons- and rights-based ecological governance*, operational from local to global and administered according to principles rooted in respect for nature and fellow human beings.²¹

¹⁸ JAMES GUSTAVE SPETH, *THE BRIDGE AT THE EDGE OF THE WORLD: CAPITALISM, THE ENVIRONMENT, AND CROSSING FROM CRISIS TO SUSTAINABILITY* 86, 225 (2008).

¹⁹ DAVID ORR, *DOWN TO THE WIRE: CONFRONTING CLIMATE COLLAPSE* 40 (2009).

²⁰ See, e.g., GAR ALPEROVITZ, *AMERICA BEYOND CAPITALISM: RECLAIMING OUR WEALTH, OUR LIBERTY, AND OUR DEMOCRACY* (2005); PETER BARNES, *CAPITALISM 3.0: A GUIDE TO RECLAIMING THE COMMONS* (2006); BROWN, *supra* note 16; CORMAC CULLINAN, *WILD LAW: A MANIFESTO FOR EARTH JUSTICE* (2d ed. 2011); JARED DIAMOND, *COLLAPSE: HOW SOCIETIES CHOOSE TO FAIL OR SUCCEED* (2005); GORE, *supra* note 16; WILLIAM GREIDER, *THE SOUL OF CAPITALISM: OPENING PATHS TO A MORAL ECONOMY* (2003); HANSEN (2009), *supra* note 9; MICHAEL HARTD & ANTONIO NEGRI, *COMMONWEALTH* (2009); ELIZABETH KOLBERT, *FIELD NOTES FROM A CATASTROPHE: MAN, NATURE, AND CLIMATE CHANGE* (2006); DAVID C. KORTEN, *THE GREAT TURNING: FROM EMPIRE TO EARTH COMMUNITY* (2006); BILL MCKIBBEN, *DEEP ECONOMY: THE WEALTH OF COMMUNITIES AND THE DURABLE FUTURE* (2007); ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* (1990).

²¹ By “commons” (as in “commons-based”) we mean, in a broad sense, a kind of social and moral economy or governance system of a participatory community of “commoners” (sometimes the general public or civil society, sometimes a distinct group) that uses and directly or indirectly stewards designated natural resources or societal creations in trust for future generations. For definitional details, see *infra* Section IV-A (“What is the Commons?”).

The term “commons,” we concede, can be confusing because it may not be immediately clear if the term is being used in a singular or plural sense—or as a “collective noun” which typically takes a singular verb tense. Thus, just as we speak of “the market” as a general entity taking a singular verb tense—as in “The market is up today”—so “the commons” can be construed as a general entity and take a singular verb tense, as in “The commons is a form of resource

This is a daunting proposition. It entails a reconsideration of some basic premises of our legal order, and of our economic, political, and cultural orders as well—made all the more difficult by the present global economic crisis and associated developments in countries like the United States where opposition to almost any environmental regulation is on the rise. Yet we believe this vital task—the regeneration of the right to environment in a commons- and rights-based ecological governance context—is entirely feasible if we liberate ourselves from the continuing tyranny of State-centric models of legal process; if we enlarge our understanding of “value” in economic thought to take account of natural capital and social well-being; if we expand our sense of human rights and how they can serve strategic as well as moral purposes; and if we honor the power of non-market participation, local context, and social diversity in structuring economic activity and addressing environmental problems.

The deeper issue may be, of course, whether contemporary civilization can be persuaded to disrupt the status quo to save our “lonely planet.” At the moment, any transformation is essentially blocked because any “serious” agenda for change must genuflect before some sacrosanct dogmas: that law is exclusively a function of the State; that markets and corporations are the primary engines of value-creation and human progress; that government involvement generally impedes innovation and efficiency; that the private accumulation of capital must not be constrained; and that “ordinary people” have few constructive roles to play in the political economy except as consumers and voters. These structural premises limit the scope of what is perceived as possible.

As it happens, however, insurgent schools of thought in economics and human rights are expanding our sense of the possible. At the same time a worldwide commons movement is arising in diverse arenas to assert new definitions of “value” that challenge the contemporary neoliberal economic and political order; to expand the idea of human rights to embrace communitarian as well as individualistic values; and to self-organize non-market, non-governmental systems for managing agricultural seeds, groundwater, urban spaces, creative works, and a wide variety of natural ecosystem resources. In addition, diverse Internet communities and fledgling grassroots movements are demonstrating new modes of commons-based governance. Taken together, these trends suggest the broad outlines of a way forward—a way to bring ecological sustainability, economic well-being, and stable social governance into a new and highly constructive alignment. If one attends to many robust trends now on the periphery of the mainstream political economy, one can begin to imagine a coherent and compelling new paradigm that compensates for the many serious deficiencies of centralized governments (corruption, lack of transparency, rigidity, a marginalized citizenry) and concentrated markets (externalized costs, fraud, the bigger-better-faster ethos of material progress).

management.” Confusion often results because “commons” ends with an “s,” which suggests that it is a plural noun. However, we prefer to avoid such dubious locutions as “commonses.”

Beyond its collective-noun usage, it is customary to use the term “commons” to refer to discrete, particular regimes for managing common-pool resources, which should therefore take a singular verb tense, as in “That forest commons in Nepal is doing a fine job of conservation.” Finally, the term “commons” often is used to speak about multiple, discrete commons, a usage that should properly use a plural verb tense, as in “The hundreds of digital commons on the Internet represent a new mode of production.” Usage rules are muddled by the habit of a minority of scholars to use the term “common” (without the “s”) to denote both singular and collective-noun forms of “commons.” However, because this is a minority usage, we demur and have adopted the standard usage of “commons,” as explained above.

All of these trends are not only congruent; they also are convergent, together serving as complementary building blocks for a new paradigm of principled and effective ecological governance that is both consistent with, and supported by, a right to environment that venerates all life on earth now and in the future. As such, they speak to the likes of Dahle, Speth, Orr, and others who call for a fundamental rethinking and reordering of the ways in which we go about the world's environmental and related business (including, we hasten to add, even the business of war and peace which climate change is likely to provoke as various nations and peoples compete for dwindling supplies of water, forests, fish, and other natural resources). Indeed, given that “[b]usiness-as-usual now appears as an irreversible experiment with the only atmosphere humans have,”²² it is impossible to think that responses to our “planetary emergency” can be successful without innovative, transformative action—legal, political, economic, and otherwise. New forms of commons- and rights-based ecological governance reflect a new worldview of thinking and doing, rooted deeply in human history and propelled, in this era of increasing environmental threats, by “the fierce urgency of now.”

We begin our consideration of this new cosmology by assessing the right to environment as presently understood (Section II) and by reviewing the trends that are converging to support a new paradigm for worldwide ecological governance that both facilitates and embraces the right to environment (Section III). In the remainder of this essay, we explicate the Commons as a model for ecological governance (Section IV), imagine an architecture of law and policy that could support its successful operation (Section V), and speculate on the way forward “from here to there”—a pathway by which interested parties might actualize the new policy frameworks needed to help secure the right to environment (Section VI).

We of course are mindful that fundamental social change is typically slow when not marked by violence. We therefore do not denigrate ongoing efforts to advance the right to environment within the existing, traditional system.

Nor do we reject the search for other options, such as potentially complementary advances in science and technology relative to climate change. Given the so far alarmingly [laggard](#) response to warnings of global ecological collapse by this century's end, whether born of ignorance or doubt or denial or all three, some form of geoengineering—e.g., “stratosphere doping” (injecting large quantities of nonreactive metal or sulfate nanoparticles into the atmosphere and stratosphere)—*may* prove necessary for at least temporary risk reduction in the relatively near future. Which is not to suggest that it is wise to rely upon geoengineering as a first defense against climate change. In addition to the profound ethical questions involved, the law of unintended consequences says it is not, particularly when tampering with ecosystems we do not fully understand. It also lures away from the essential task of reducing our greenhouse gas emissions by tempting us with technological fixes that are potentially elusive, even dangerous. There are, however, growing numbers of ethicists, scientists, and others who argue thoughtfully that we must begin to research geoengineering now so

²² BURNS H. WESTON & TRACY BACH, RECALIBRATING THE LAW OF HUMANS WITH THE LAWS OF NATURE: CLIMATE CHANGE, HUMAN RIGHTS, AND INTERGENERATIONAL JUSTICE 60 (Climate Legacy Initiative, Vermont Law School and The University of Iowa, 2009), available at http://www.vermontlaw.edu/Academics/Environmental_Law_Center/Institutes_and_Initiatives/Climate_Legacy_Initiative/Publications.htm (accessed Aug. 3, 2011).

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that it is available as a tool to protect the planet if and when global warming and climate change trends begin to reach irreversibly critical tipping points.²³

We believe, on the other hand, that much of geoengineering engages the same kind of Industrial Age thinking that brought us global warming in the first place, that climate change poses challenges that go far beyond the cutting of greenhouse gas emissions, and that even these challenges do not define the entirety of the worldwide environmental *problématique* that begs for solution. To pursue geoengineering as a "solution" represents a dangerous, myopic fantasy, especially when a practical, compelling alternative is at hand. In our view, commons-and rights-based ecological governance, free of the limitations mentioned and drawing upon a rich history of commons efficacy, versatility, and social appeal in many specific domains—water, land, fisheries, and forests, not to mention a variety of digital realms—offers the best promise for an environment fit for human beings and all other living things. It constitutes a “new/old” class of socio-ecological collaboration that, in the course of providing for human needs, can regenerate the human right to a clean and healthy environment and, more broadly, the fundamental, organic interconnections between humankind and Earth.

To be sure, much of the success of commons, ecological and otherwise, has stemmed from their character historically as decentralized, participatory, self-organized systems. It is fair, therefore, to wonder if commons can be the basis for a larger, macro-solution without some new law and policy architecture that can recognize and support the skillful nesting of different types of authority and control at different levels of governance (“subsidiarity”). At the same time, one might plausibly turn the question around: Can any macro-solutions succeed without some genuine engagement with decentralized, participatory, self-organized systems?

Not to be overlooked, either, are the difficulties of recognizing indivisible collective interests in democratic polities that revolve around individual rights and entitlements. There is also the arguably larger challenge of devising new multilateral governance structures acceptable to the world’s states while still empowering commoners and leveraging their innovations and energy as stewards of specific ecosystem resources. These and related issues we consider in the pages following, especially in Sections IV and V, *infra*.

We thus are embarked on a large intellectual task, one we cannot hope to fulfill in one even lengthy essay; and it is for this reason that, in the past year, we launched an independent research

²³ See, e.g., Dale Jamieson, *Ethics and Intentional Climate Change*, 33 CLIMATE CHANGE 323 (1996), also available at <http://www.springerlink.com/content/w673766t3316r474> (accessed June 25, 2011) and its adaptation in *The Ethics of Geoengineering*, in 1 PEOPLE AND PLACE No. 3 (2009), http://www.peopleandplace.net/perspectives/2009/5/13/the_ethics_of_geoengineering (accessed June 25, 2011); see also GOODELL, *supra* note 12 and [David G. Victor, et al., The Geoengineering Option: A Last Resort against Global Warming?](#), 88 FOT. AFF. 64 (Marc/April 2009). But see ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD), CLIMATE MITIGATION: WHAT DO WE DO? (2008); Sir Nicholas Stern, *Executive Summary*, STERN REVIEW, *supra* note 9, at x-xxi; ELI KINTISCH, HACK THE PLANET: SCIENCE'S BEST HOPE—OR WORST NIGHTMARE—FOR AVERTING CLIMATE CATASTROPHE (2010); [Stephen Pacala & Robert H. Socolow, Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies](#), 305 SCIENCE 968 (2001); and the readings in Problem 7-2 of JONATHAN C. CARLSON, SIR GEOFFREY W.R. PALMER, & BURNS H. WESTON, INTERNATIONAL ENVIRONMENTAL LAW AND WORLD ORDER: A PROBLEM-ORIENTED COURSEBOOK (3d ed., forthcoming from Thomson-West in Autumn 2011).

initiative we call the Commons Law Project.²⁴ The ensuing pages, beginning with our assessment of the right to environment at this point in time, should be understood, therefore, as but an introduction to the Project. We take on even this limited probe, however, with a humility born not only of the enormity of the intellectual challenge but, more importantly, of the truth that neither of us can possibly boast the ecological expertise that others before us can rightfully claim. At the same time, our limitations aside, it is abundantly clear that humanity's existence and well-being depend upon a clean and healthy environment; therefore also that the protection of Mother Nature, via the power of rights especially, must be made to rank as a preminent societal priority, equal to our aspirations to eradicate disease, poverty, war, and other severe forms of human abuse and suffering. Fortunately, such commitments can already be seen in the *Pachamama* (Goddess Earth) Movement now spreading in South America and beyond.²⁵

²⁴ The Commons Law Project (CLP) is an outgrowth of the Climate Legacy Initiative (CLI), a now concluded collaboration of the Environmental Law Center of Vermont Law and the UI Center for Human Rights of The University of Iowa. In its concluding policy paper, the CLI recommended the development of "a law of the ecological commons." See Recommendation 1 ("Define and Develop a Law of the Ecological Commons for Present and Future Generations," coauthored by Carolyn Raffensperger, Burns H. Weston, and David Bollier) in WESTON & BACH, *supra* note 22, at 63.

²⁵ See, e.g., Jeanne Roberts, *South America Leading the Push toward Sustainability*, <http://blog.cleantechies.com/2010/05/05/latin-america-pushes-sustainability> (accessed June 25, 2011). For further discussion and detail, including pertinent legal citations, see *infra* text accompanying notes 127-66; see also CULLINAN, *supra* note 20, at 178-91 (recounting the emergence of such "wild law" thinking and strategizing in Africa, India, the United Kingdom and Australia, the United States, and within the U.N. system, as well as in Latin America).