

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

GREEN GOVERNANCE

The vast majority of the world's scientists agree: we have reached a point in history where we are in grave danger of destroying Earth's life-sustaining capacity. But our attempts to protect natural ecosystems are increasingly ineffective because our very conception of the problem is limited; we treat "the environment" as its own separate realm, taking for granted prevailing but outmoded conceptions of economics, national sovereignty, and international law. *Green Governance* is a direct response to the mounting calls for a paradigm shift in the way humans relate to the natural environment. It opens the door to a new set of solutions by proposing a compelling new synthesis of environmental protection based on broader notions of economics and human rights and on commons-based governance. Going beyond speculative abstractions, the book proposes a new architecture of environmental law and public policy that is as practical as it is theoretically sound.

Burns H. Weston is the Bessie Dutton Murray Distinguished Professor of Law Emeritus and Senior Scholar of the Center for Human Rights at The University of Iowa. A longtime – now honorary – member of the Board of Editors of the *American Journal of International Law* and a Fellow of the World Academy of Art and Science, he has authored, co-authored, and co-edited many books and articles, especially in international human rights and related international law fields. He also is known as an "engaged scholar," and for his activism and scholarship bridging human rights and environmental law he was awarded the honorary degree of Doctor of Laws (LL.D.) by Vermont Law School in 2009.

David Bollier is an author, activist, and independent scholar of the commons. He is the author or editor of twelve books, including four on various aspects of the commons. He is co-founder of the Commons Strategies Group, an international consulting project, and co-founder of Public Knowledge, a Washington advocacy group for the public's stake in copyright and Internet policies. Bollier is also Senior Fellow at the Norman Lear Center at the USC Annenberg School for Communication and Journalism, winner of the Bosch Prize in Public Policy at the American Academy in Berlin (Fall 2012), and a longtime rapporteur for the Aspen Institute.

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

Green Governance

ECOLOGICAL SURVIVAL, HUMAN RIGHTS, AND THE
LAW OF THE COMMONS

BURNS H. WESTON

The University of Iowa College of Law

DAVID BOLLIER

Commons Strategies Group



CAMBRIDGE
UNIVERSITY PRESS

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

CAMBRIDGE UNIVERSITY PRESS

Cambridge, New York, Melbourne, Madrid, Cape Town,
Singapore, São Paulo, Delhi, Mexico City

Cambridge University Press

32 Avenue of the Americas, New York, NY 10013-2473, USA

www.cambridge.org

Information on this title: www.cambridge.org/9781107034365

© Burns H. Weston and David Bollier 2013

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2013

Printed in the United States of America

A catalog record for this publication is available from the British Library.

Library of Congress Cataloging in Publication Data

Weston, Burns H., 1933–

Green governance : ecological survival, human rights, and the law of the commons / Burns H. Weston, David Bollier.

p. cm.

Includes bibliographical references (p.) and index.

ISBN 978-1-107-03436-5 (hardback)

1. Environmental law – Philosophy. 2. Human rights – Environmental aspects.

3. Commons. 4. Global commons. 5. Environmental law, International – Philosophy.

6. Environmental protection – International cooperation. 7. Environmental justice.

I. Bollier, David. II. Title.

K3585 .w476

344.04'6–dc23 2012029091

ISBN 978-1-107-03436-5 Hardback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party Internet websites referred to in this publication and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

To our children and their families

Timothy, Leah, and Emma

Rebecca, Eduardo, Elijah, and Isabella

Malin and John

Martin, Linda, Olivia, and Cecilia

Johannes, Cathrine, Sima, and Joar

Samuel and Thomas

and all other children and grandchildren

who will have to contend

with the Anthropocene Age

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

Contents

<i>Acknowledgments</i>	<i>page</i> ix
<i>Prologue</i>	xiii
PART I	
1 Trends That Point Toward a New Synthesis	3
A. The Tragedy of the Market	6
B. New Governance Models on the Internet	15
C. Imagining New Types of Governance That Go Beyond Market and State	20
2 The Human Right to a Clean and Healthy Environment	27
3 The Quest for a New Rights-Based Pathway	50
A. Intergenerational Environmental Rights	51
B. Nature's Rights	57
C. Four Systemic Complications	68
4 Making the Conceptual Transition to the New Paradigm	77
A. The Power of Human Rights	87
B. The Potential of Vernacular Law	104
C. The Necessity of Self-Organized Governance and Collaboration in Complex Adaptive Systems	112
PART II	
5 The Commons as a Model for Ecological Governance	123
A. The Characteristics of Commons	124

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

viii

Contents

	B. A Brief History of Commons Law and the Right to the Environment	131
	C. Social Scientists Rediscover the Commons	146
6	The Rise of the Commons Movement Globally	155
	A. Salient Contemporary Commons	158
	B. Tensions between Modern State Law and the Commons	173
7	Imagining a New Architecture of Law and Policy to Support the Ecological Commons	179
	A. Internal Governance Principles of Commons	181
	B. Macro-Principles and Policies to Guide the State/Market in Supporting the Commons Sector	191
	C. The Special Challenge of Large-Scale Ecological Commons	204
8	Catalytic Strategies for Achieving Green Governance	226
	A. Vernacular Law Commons	229
	B. “Private Law Work-Arounds”	230
	C. Localism and Municipal Law as a Vehicle for Protecting Commons	233
	D. Federal and Provincial Governments as Supporters of Commons Formation and Expansion	236
	E. Expanding and Strengthening the Public Trust Doctrine	238
	F. State Trustee Commons	242
	G. Eco-Digital Innovations: Crowdsourcing, Participatory Sensing, Wikis, and More	243
	H. Establishing Commons Trusts to Manage Common Assets and Distribute Revenues	245
	I. State Chartering of New Types of Commons Trusts	248
	J. New Types of Multilateral Frameworks That Can Manage Large-Scale Common-Pool Resources	252
	<i>Epilogue</i>	261
	<i>Appendix: Universal Covenant Affirming a Human Right to Commons- and Rights-Based Governance of Earth’s Natural Wealth and Resources</i>	269
	<i>Addendum: The International Legal Status of the Human Right to a Clean and Healthy Environment</i>	285
	<i>Bibliography of Pertinent Books</i>	337
	<i>Index</i>	355

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

Acknowledgments

Upon completing books, authors come to realize how, along the way, many helping hands make the entire journey possible. This was certainly the case with *Green Governance*. What began as a series of informed hunches, an essay then too long to meet standard law review page limitations, was allowed to expand and mature through the support of many generous and insightful people of varied talents.

Our first debt of gratitude must go to Harriet Barlow and the Harold K. Hochschild Foundation for having had sufficient faith in our vision to give us an indispensable seed grant. In the same spirit, University of Iowa College of Law Dean Gail Agrawal and Director of Financial Aid and Research Assistantships Susan Palmer provided much-needed research assistant support in both the early and late stages of our endeavor; and the staff of The University of Iowa Center for Human Rights assured us essential logistical and moral support throughout. Further, as our work germinated, we were fortunate to encounter Burns Weston's longtime friend Victor Arango who, as if on cue, introduced us to the Arsenault Family Foundation, which, thanks to Marcel Arsenault, provided significant, vital support toward the completion of our Book. Particularly helpful – and ever gracious, too – was Meadow Didier, former Program Director of the Arsenault Family Foundation, who clearly saw the value of our ideas and helped shepherd them forward.

We are similarly indebted to John Berger, Senior Editor at Cambridge University Press, who saw immediately the potential of our project and cheered us onward well before our manuscript was completed and ready for copy editors' eyes. Such publisher faith and encouragement is by no means commonplace, and it emboldened us to work more speedily and effectively than otherwise we might have done.

The preparation of a book of complexity such as ours entails much research, fact-checking, editorial intervention, and administrative assistance. For these

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

tasks, we are especially grateful to Samuel M. DeGree, first as a law student research assistant at The University of Iowa College of Law, later as our full-time research associate. Early on, former Iowa law students Scott O. McKenzie, Suzan M. Pritchett, and Wan-chun (Dora) Wang graced us with insightful imaginations and research skills; in the closing months, Charles Michael Judd, newly elected *Iowa Law Review* Editor-in-Chief, gave adroitly and generously of his empathetic proofreading and source-checking expertise. We thank also Iowa law student Courtney L. Burks who helped us ever so graciously with our bibliography.

Words alone, however, cannot express adequately our profound gratitude to our friend (and early “co-conspirator”) Anne Mackinnon, who selflessly shared her wise counsel and acute eye in editing, greatly improving our final manuscript preceding its submission to Cambridge University Press. For a book that pushes the boundaries of conventional wisdom, it is important to have smart, trustworthy friends who are willing to share their expertise and speak insightful – sometimes hard – truths. Anne is and was such a friend.

Much the same can be said of numerous others from whom we benefited greatly. We are especially grateful to those who, in a late October 2011 workshop, gave generously of their busy schedules to spend several days with us providing invaluable critiques of an earlier version of our manuscript and suggestions for how to improve it: Peter Barnes, Michel Bauwens, Jonathan C. Carlson, John Clippinger, Samuel Degree, Meadow Didier, Silke Helfrich, Stephen Humphreys, Anne Mackinnon, Bryan Norton, James Quilligan, Dinah Shelton, and Jack Tuholske.

We thank also Norman Lear for his generous hospitality in allowing us and our October 2011 workshop colleagues to meet at The Gulley, his inspiring retreat in southern Vermont. It is surely among the finest settings anywhere for serious yet informal conversation on chilly autumn days.

Along the way, we received invaluable substantive and tactical advice and encouragement from Richard Falk, Hermann Hatzfeld, Bill McKibben, David Orr, Sir Geoffrey Palmer, Francesca Rheannon, Geoffrey Shields, James Gustave Speth, Mary Christina Wood, and Blaikie and Robert Worth. We are deeply appreciative of their support.

Burns Weston wishes to recall, in addition, a tribute to his longtime colleague and friend Michael Reisman of Yale Law School, made at the outset of the original essay from which this book evolved. The tribute was written to make amends for an intent and circumstance that did not rhyme soon enough to contribute to a much-deserved festschrift honoring Professor Reisman and his fecund career: *Looking to the Future: Essays on International Law in Honor of W. Michael Reisman* (2010). Yet, as our essay, though posted for viewing

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

Acknowledgments

xi

at www.commonslawproject.org, never was officially published, this tribute is, therefore, formally – and happily – reaffirmed here. Anyone familiar with Reisman’s brilliant *Law in Brief Encounters* (1999) will understand why – and why in our prior essay and this book in particular.

Finally, Burns Weston thanks Marta Cullberg Weston whose acute insight, personal sacrifice, and amazing patience proved to be a treasured asset from beginning to end, always willing was she to bend a new idea or pursue a daring line of thought. With her: book. Without her: no book.

David Bollier is grateful once again to Ellen Bollier for her love, good cheer, and encouragement throughout the odyssey of another book.

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

Prologue

At least since Rachel Carson's *Silent Spring*,¹ we have known about humankind's squandering of nonrenewable resources, its careless disregard of precious life species, and its overall contamination and degradation of delicate ecosystems.² In the last decade or so, these defilements have assumed a systemic dimension. Buoyed by capital surpluses not easily reinvested in ordinary production streams, business enterprises, commonly with the blessings if not the active partnership of government, are fiercely commercializing countless resources that were once beyond the reach of technology and markets – genetic material, nanoscale matter, large swaths of the ocean, major aquifers, the orbital paths of space, and much else. David Bollier has called this great, unacknowledged scandal of our time a “silent theft” and “the private plunder of our common wealth.”³

The consequences visited on our natural environment, compounded by those sustained by our economy, communities, social fabric, and culture,

¹ 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 geo-engineering 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. *Id.*

² 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, a diplomat and conservationist born in Woodstock, Vermont, 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.

³ See David Bollier, *Silent Theft: The Private Plunder of Our Common Wealth* (2003).

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

have been ruinous. Briefly put, the State and Market, in pursuit of commercial development and profit, have failed to internalize the environmental and social costs of their pursuits and, in so doing, have neglected to take measures to preserve or reproduce the preconditions of capitalist production. The results include pollution and waste in the form of acid rain, hydrocarbon emissions, poisoned waterways, and toxic waste dumps; short-term overuse and destruction of natural resources such as forests, waterways, and fisheries, along with the roads, bridges, harbors, and other material infrastructure needed for their exploitation; and the devaluation of urban and other human settlements, exemplified by “brownfields” and suburban sprawl, which especially affect the poor and racial and other minorities. The policies and practices responsible for this state of affairs are morally and economically unacceptable; they are also environmentally unsustainable.

But the grim story does not end here. Lately, we have come to realize the extent to which atmospheric emission of carbon dioxide and other greenhouse gases – and consequent global warming and climate change – exacerbate the impact of those practices, imperil human rights, and threaten Planet Earth to an arguably unprecedented degree.⁴

The details are well documented, thanks to the United Nations Intergovernmental Panel on Climate Change (IPCC) and other authoritative sources.⁵ In

⁴ Bill McKibben, early to sound the alarm about global warming, titled his recent book *Earth: 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 book were born. See also James Lovelock, *The Revenge of Gaia: Why the Earth Is Fighting Back – and How We Can Still Save Humanity* (2006); —, *The Vanishing Face of Gaia: A Final Warning* (2009).

⁵ Most of what follows is based on the findings of the IPCC. Although recently subject to political attack from those who 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 (UN), and the UN 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 more than 130 countries. Co-winner (with former US Vice President Al Gore) of the Nobel Peace Prize in 2007, the IPCC is currently working on its Fifth Assessment Report, to be finalized in 2014. Its website provides abundant further information. See Intergovernmental Panel on Climate Change, <http://www.ipcc.ch> (accessed May 23, 2012).

Other authoritative sources on which we have relied include the US Global Change Research Program, which, begun in 1989 and, as stated on its website, “coordinates and integrates federal research on changes in the global environment and their implications for society” [US Global Change Research Program, www.globalchange.gov (accessed Apr. 12, 2012)]; the Millennium Ecosystem Assessment, called for by former UN Secretary-General Kofi Annan in 2000, initiated in 2001, and involving, as announced on its website, “the work of more than 1,360 experts worldwide . . . [in] state-of-the-art scientific appraisal of the condition

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

just the next two decades or less, without significant mitigation of greenhouse gas emissions we face a *minimum* 0.64°C – 0.69°C (1.17°F – 1.242°F) increase in Earth's mean surface air temperature (currently approximately 15°C , 59°F) and a "likely . . . 2°C – 4.5°C " (2.6°F – 8.1°F) increase "with a *most likely* value of about 3°C " (5.4°F) within the same time frame.⁶ These predicted temperature increases are believed to be irreversible within the next five to ten years and therefore potentially catastrophic in future years, within the lifetimes of the majority of the world's population. Already they play a major role in the present-day loss of land, forests, freshwater systems, and biodiversity, and are projected to cause significant sea level rises;⁷ 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 fifty-four countries of Africa; swelling populations of refugees in search

and trends in the world's ecosystems and the services they provide . . ." [Millennium Ecosystem Assessment, <http://www.maweb.org/en/Index.aspx> (accessed Apr. 12, 2012)]; and UNEP's February 2012 Working Paper focusing on the continent arguably most vulnerable to climate change in the world. United Nations Development Programme, *Demographic Projections: The Environment and Food Security in Sub-Saharan Africa* (Working Paper 2012–001, Feb. 2012), <http://web.undp.org/africa/knowledge/working-afhdr-demography-environment.pdf> (accessed May 1, 2012). See also Kirstin Dow & Thomas E. Downing, *The Atlas of Climate Change: Mapping the World's Greatest Challenge* (3d ed. 2011); Al Gore, *An Inconvenient Truth: The Planetary Emergency of Global Warming and What We Can Do About It* (2006); James Hansen, *Storms of My Grandchildren: The Truth About the Coming Climate Catastrophe* (2009); Lovelock, *supra* note 4; Mark Lynas, *Six Degrees: Our Future on a Hotter Planet* (2008); National Research Council, *Abrupt Climate Change: Inevitable Surprises* (National Academy of Sciences, 2002); Sir Nicholas Stern, *The Economics of Climate Change: The Stern Review* (2007) [hereinafter "Stern Review"].

⁶ G.A. Meehl et al. "Global Climate Projections," in *Climate Change 2007: The Physical Science Basis Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* 749 (S. Solomon et al. eds., 2007) (emphasis added), available at <http://www.ipcc.ch/pdf/assessment-report/ar4-wg1-wg1-chapter10.pdf> (accessed May 1, 2012). True, we do not know precisely how much and how fast our planet will heat up during this century. It is difficult to make exact predictions about how long greenhouse gas emissions will continue to increase and how exactly Earth's interdependent ecosystems will react to warmer temperatures. But we do know that Earth's temperature has increased by 6°C in the last 100 years and that, without major human intervention, it is destined to get dangerously warmer – from 2°C to 6°C – within the coming 50–100 years. The authors of *The Atlas of Climate Change*, *supra* note 6, put it this way: "The pre-industrial concentration of carbon dioxide (CO_2) was 280 parts per million in the atmosphere. Most emissions scenarios expect a concentration of over 520 parts per million by 2100 in the absence of concerned climate policy." *Id.* at 40.

⁷ The Greenland ice sheet is estimated to tip into irreversible melt when global warming rises to a range of only 1.9°C to 4.6°C (3.42°F – 8.28°F) relative to preindustrial temperatures. *Id.* at 752.

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

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

More specifically, observe the IPCC, the United Nations Development Programme, and other leading authorities,⁸ Africa is threatened by projected severe heat and consequent water stress to lose up to 247 million acres of cropland by 2050, equal to the size of all US 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 probable extinction, their sovereignty swallowed by rising seas – imagine 75 million Pacific Islanders swept from their homes into refugee status. Indigenous cultures – the Arctic Inuit and Amazonian Kamayurá, for example – will likely wither away for lack of food caused by overheated and receding habitats. Desperate people in search of food, water, and safe shelter – like the “environmental refugees” already fleeing Kenya’s drought-stricken Rift Valley – are projected to number as many as 250 million by 2020, dwarfing the number of political refugees that traditionally has strained the world’s caring capacities.

Renowned NASA climatologist James Hansen, among the 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.”⁹ 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.”¹⁰ 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

⁸ See *Fourth Assessment Report, Climate Change: 2007 Synthesis Report Summary for Policy-makers* 7–14 (2007). See also the other leading authorities cited in note 5, *supra*.

⁹ 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 a Climatologist*, [davidkabraham.com](http://www.davidkabraham.com) (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,” *Wash. Post* (Mar. 1, 2009), <http://www.washingtonpost.com/wp-dyncontent/article/2009/02/28/AR2009022801667.html> (quoting James Hansen) (accessed June 25, 2011); James Hansen et al., *Target Atmospheric CO₂: Where Should Humanity Aim?*, <http://www.columbia.edu/~jeh1/2008/TargetCO220080407.pdf> (accessed June 25, 2011).

¹⁰ Lovelock, *supra* note 4, at 6.

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

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 Horsemen 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.¹¹

If Hansen and Lovelock are even only half right, the ecological (and social) future bodes ill almost everywhere, evoking “discomfiting images of a non-future.”¹²

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, 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, 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 framed in the language of “prevention”; the focus has shifted, instead, to “mitigation” and, increasingly, “adaptation.”¹⁵

¹¹ Jeff Goodell, *How to Cool the Planet: Geoengineering and the Audacious Quest to Fix Earth's Climate* 89–90 (2010).

¹² Burns H. Weston & Tracy Bach, *Recalibrating the Law of Humans with the Laws of Nature: Climate Change, Human Rights, and Intergenerational Justice* 60 (2009) (published by the Climate Legacy Initiative, Vermont Law School and The University of Iowa), available at http://www.vermontlaw.edu/Academics/Environmental_Law_Center/Institutes_and_Initiatives/Climate_Legacy_Initiative/Publications.htm (accessed Aug. 3, 2011).

¹³ Judging from a 1998 UNESCO publication, there exist today more than 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), available at <http://nijhoffonline.nl/subject?id=ILWO> (accessed May 1, 2012).

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 4.

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

xviii

Prologue

Yet, even in this alarming setting we have options – economic, political, scientific, technological, cultural, and, not least, legal.¹⁶ It is important that we explore and evaluate each, and as soon as possible if we are to guarantee against catastrophe – recognizing, however, that no option is likely to succeed over the long run if it bespeaks, fundamentally, a business-as-usual approach. Warns Øystein Dahle, chairman of the board of the Worldwatch Institute and former vice president of Exxon Norway, said:

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 [on] 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 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, comments:

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 11; 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*, at ch. 7 (2010).

¹⁷ Øystein Dahle, Board Chairman, Worldwatch Institute, From Cowboy Economy to Spaceship Economy, Remarks at Alliance for Global Sustainability Annual Meeting 2004 at 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 at http://www.globalsustainability.org/data/AGSAM2004_Proceedings.pdf (accessed June 25, 2011).

¹⁸ James Gustave Speth, *The Bridge at the Edge of the World: Capitalism, the Environment, and Crossing from Crisis to Sustainability* 86, 225 (2008).

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

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: free-market economics (in both its classical and neoliberal guises) has given rise to a legal apparatus and political system that elevates territorial sovereignty and material accumulation over shared stewardship of the natural environment.²⁰ This is impeding our search for systemic, durable change.

At the same time, however, a variety of civil resistance movements around the world, new sorts of Internet-based collaboration and governance, and dissenting schools of thought in economics, environmental stewardship, and human rights are asserting themselves and gaining both credibility and adherents. This moment in history therefore presents an unusual opening in our legal and political culture for advancing new ideas for effective and just environmental protection – locally, nationally, regionally, globally, and points in between.

This book proposes a new template of effective and just environmental protection based on the new/old paradigm of the commons and an enlarged understanding of human rights.²¹ We call it “green governance.” It is based on a reconceptualization of the human right to a clean and healthy environment

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* (2d ed. 2011) (featuring a new introduction by James Gustave Speth); 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, *supra* note 5; Michael Hardt & 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); Curt Stager, *Deep Future: The Next 100,000 Years of Life on Earth* (2011); Laura Westra, *Human Rights: The Commons and the Collective* (2011). See also David M. Nonini, “Introduction,” in *The Global Idea of the Commons* 1, 13 (David M. Nonini ed., 2007).

²¹ By “commons” (as in “commons-based”) we mean, in a broad sense, collectively managed, shared resources – 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 Ch. 5, § A (“The Characteristics of the Commons”), *infra* at 124. (*cont.*)

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

and the modern rediscovery of the age-old paradigm of the commons, whose value can be seen in arrangements for governing emerging arenas such as the Internet and traditional ones such as rural forests and fisheries, town squares, universities, and community life.

The Commons is a regime for managing common-pool resources that eschews individual property rights and State control. It relies instead on common property arrangements that tend to be self-organized and enforced in complex and sometimes idiosyncratic ways (which distinguish it from *communism*, a top-down, State-directed mode of governance whose historical record has been unimpressive). A commons is generally governed by what we call *Vernacular Law*, the “unofficial” norms, institutions, and procedures that a peer community devises to manage its resources on its own, and typically democratically. State law and action may set the parameters within which Vernacular Law operates, but the State does not directly control how a given commons is organized and managed. (For now, especially for global geo-physical common-pool resources such as the oceans and atmosphere, Vernacular Law takes a backseat to the State and the existing, inadequate system of multilateral institutional governance.)

In its classic form, a commons operates in a quasi-sovereign way, similar to the Market but largely escaping the centralized mandates of the State and the logic of Market exchange while mobilizing decentralized participation on the ground. In its broadest sense, commons could become important vehicles of green governance for assuring a right to environment at local, regional, national, and global levels. This will require, however, innovative legal and policy norms, institutions, and procedures to recognize and support commons as a matter of law.

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 management.” Confusion often results because “commons” ends with an “s,” which suggests that it is a plural noun. We prefer, however, 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 some scholars to use the term “common” (without the “s”) to denote both singular and collective-noun forms of “commons.” Because this is a minority usage, however, we have adopted the standard usage of “commons,” as just explained.

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)*Prologue*

xxi

It is our premise that human societies will not succeed in overcoming our myriad eco-crises through better green technology or economic reforms alone. We must pioneer new types of governance that allow and encourage people to move from anthropocentrism to biocentrism and to develop qualitatively different types of relationships with nature itself and, indeed, with each other. An economics and supporting civic polity that valorizes growth and material development as the precondition for virtually everything else is ultimately a dead-end – literally.

We must therefore cultivate a practical governance paradigm based on, first, a respect for nature, sufficiency, interdependence, shared responsibility, and fairness among all human beings; and, second, an ethic of integrated global and local citizenship that insists on transparency and accountability in all activities that affect the integrity of the environment.

We believe that commons- and rights-based ecological governance – green governance – can fulfill this logic and ethic. Properly done, it can move us beyond the neoliberal State and Market alliance (what we call the “State/Market”²²), an intimate collaboration that is chiefly responsible for the current, failed paradigm of ecological governance. A new Commons Sector, operating as a complement to the State and Market, could reinvent some of the fundamental ways that we orient ourselves to, and manage, natural ecosystems. It could give rise to new institutional forms, legal principles, socioecological management practices, economic thinking, and cultural values.

We realize that this is a daunting proposition. It entails a reconsideration of some basic premises of our cultural, economic, legal, and political orders. But demands for innovation in each of these areas – if not bold new breakthroughs – are growing louder by the day. In their different ways, the Arab Spring, the Spanish Indignados, and thousands of Occupy encampments all testify to the deficiencies of conventional political structures and processes. As the economic crisis of 2008 has dragged on and gone global, the fissures that have fractured neoclassical economics have spread to other fields. Insurgent factions in ecological economics, environmental stewardship, human rights advocacy, commons scholarship, and Internet-based governance are proposing attractive, more compelling alternatives. The edifice of conventional wisdom and official pieties is visibly crumbling. What shall take its place?

Like it or not, we have embarked on a profound transition in our political economy and culture. This transition is difficult to navigate not just because the intellectual alternatives are still being worked out, but because environmental protection is not only about science; it is also about cultural identity

²² For explication, see *infra* Ch. 1 note 1.

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

and politics. As sociopolitical analyst and critic Naomi Klein has argued, the political right, in the United States at least, sees environmentalism as a stalking horse intent on transforming the existing State/Market system into some kind of eco-socialism.²³ Indeed, there is little question that the State/Market in its current incarnations must change if the planet's ecosystems are to survive and thrive, but our vision of green governance does not call us back to communism or socialism, nor rally us to utopian eco-anarchism.

We believe that the pursuit of a clean and healthy environment through commons- and rights-based ecological governance is a feasible extension of existing models and trends – but one that will require some challenging transformations. We will need to liberate ourselves from the continuing tyranny of State-centric models of legal process and enlarge our understanding of “value” in economic thought to take account of natural capital and social well-being. In addition, we will need to expand our sense of human rights and how they can serve strategic as well as moral purposes and honor the power of nonmarket participation, local context, and social diversity in structuring economic activity and addressing environmental problems.

The more searching question is whether contemporary civilization can be persuaded to disrupt the status quo to save our “lonely planet.” Can we as a society and individually surrender certain deep cultural commitments and evolve in new directions? At the moment, transformation is essentially blocked because any serious agenda for change must genuflect before the 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, and they are backed by powerful economic and political interests, Big Oil and Big Coal perhaps most prominent among them.

But we see practical reasons for hope. 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

²³ See Naomi Klein, “Capitalism vs. the Climate,” *The Nation*, Nov. 28, 2011, at 11: “As . . . Larry Bell succinctly puts it in his new book, *Climate of Corruption*, climate change ‘has little to do with the state of the environment and much to do with shackling capitalism and transforming the American way of life in the interests of global wealth redistribution.’”

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

economic and political order. Commons notions are enabling the expansion of human rights to embrace communitarian as well as individualistic values and the creation of self-organized, nonmarket, nongovernmental 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 glimpse a coherent and compelling new paradigm that addresses 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).

These trends are not only congruent; they are also convergent, together serving as complementary building blocks for a new paradigm of principled and effective ecological governance. As such, they speak to 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 even the business of war and peace, where climate change is likely to provoke nations and peoples to compete for dwindling natural resources). Indeed, given that “[b]usiness-as-usual now appears as an irreversible experiment with the only atmosphere humans have,”²⁴ 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 in Part I, first by reviewing the trends that are converging to support a new paradigm of green governance (Chapter 1). We proceed by assessing the strategically essential human right to environment as presently understood (Chapter 2). Next, we note and assess the emergence of alternative rights-based approaches (Chapter 3) and then we explore how human rights can help make the conceptual and functional transition to the new paradigm (Chapter 4).

²⁴ Weston & Bach, *supra* note 12, at 60.

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

Thereafter, we explicate the commons as a model for green governance (Chapters 5 and 6), imagine an architecture of law and policy that could support its successful operation in both small- and large-scale settings (Chapters 7 and 8), and speculate on the way forward “from here to there” – a human rights pathway by which interested parties might actualize the new policy frameworks needed (Epilogue).

We are mindful, certainly, 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. For example, given the laggard response to warnings of global ecological collapse by this century’s end, we recognize that growing numbers of ethicists, scientists, and others have argued thoughtfully that we must begin to research geoengineering now so 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.²⁵ It is surely unwise, however, to rely on geoengineering – for example, “stratosphere doping” (injecting large quantities of nonreactive metal or sulfate nanoparticles into the atmosphere and stratosphere), which some say *may* prove necessary for at least temporary risk reduction in the relatively near future – as a first defense against climate change, particularly when tampering with ecosystems we do not fully understand. Geoengineering has the potential to lure us away from the essential task of reducing greenhouse gas emissions by tempting us with dubious technological fixes. Moreover, precisely because such fixes could cause unintended but nonetheless severely adverse weather consequences worldwide, geoengineering cannot escape the need for some

²⁵ See, e.g., Dale Jamieson, “Ethics and Intentional Climate Change,” 33 *Climatic Change* 323 (1996) (adapted in Dale Jamieson, “The Ethics of Geoengineering,” *People and Place* (May 13, 2009), http://www.peopleandplace.net/perspectives/2009/5/13/the_ethics_of_geoengineering), available at <http://www.springerlink.com/content/w673766t3316r474> (accessed May 13, 2011); Michael Specter, “The Climate Fixers,” *The New Yorker*, p. 1, May 14, 2012, available at http://www.newyorker.com/reporting/2012/05/14/120514fa_fact_specter (accessed Sept. 8, 2012); see also Goodell, *supra* note 11; David G. Victor et al., “The Geoengineering Option: A Last Resort against Global Warming?,” *Foreign Aff.*, Mar./Apr. 2009, at 64. But see Jonathan C. Carlson, Sir Geoffrey W.R. Palmer, & Burns H. Weston, *International Environmental Law and World Order: A Problem-Oriented Coursebook* (3d ed. 2012) (readings in Problem 7–2); Eli Kintisch, *Hack the Planet: Science’s Best Hope – or Worst Nightmare – for Averting Climate Catastrophe* (2010); “Organization for Economic Cooperation and Development (OECD),” *Climate Mitigation: What Do We Do?* (2008); Stephen Pacala & Robert H. Socolow, “Stabilization Wedges: Solving the Climate Problem for the Next 50 Years with Current Technologies,” 305 *Science* 968 (2001); Sir Nicholas Stern, “Executive Summary,” in *Stern Review*, *supra* note 5, at x–xxi.

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)*Prologue*

xxv

form of global governance. Regrettably, many (if not most) geoengineering proposals engage the same kind of Industrial Age thinking that brought us global warming in the first place.

Climate change poses challenges that go far beyond reducing greenhouse gas emissions, and even these challenges do not define the entirety of the worldwide environmental *problématique* that begs for a solution. To pursue geoengineering as a solution represents a dangerous, myopic fantasy, especially when a practical, compelling alternative is at hand and offers the best promise for an environment fit for human beings and other living things. In our view, commons- and rights-based ecological governance is free of those dangers and limitations, and draws on 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. It constitutes a “new/old” class of socioecological 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 whether commons can be the basis for a larger, macro-solution without some new legal 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-solution succeed without 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 Chapters 5–8.

We thus are embarked on a large intellectual task, one we cannot hope to fulfill in just one book; and it is for this reason that, in 2010, we launched an independent research initiative, the Commons Law Project.²⁶ The ensuing

²⁶ 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 School and the UI Center for Human Rights of The University of Iowa. In its concluding policy paper,

Cambridge University Press

978-1-107-03436-5 - Green Governance: Ecological Survival, Human Rights, and the Law of the Commons

Burns H. Weston and David Bollier

Frontmatter

[More information](#)

pages should be understood as an introduction to the project, whose work is ongoing. We take on this limited probe with humble acknowledgment that the challenges are enormous and that others bring greater ecological expertise to some important areas of investigation. At the same time, we believe that commons- and rights-based ecological governance has an essential role to play in forging a future for humanity through the practical assertion of our collective right to a clean and healthy environment. Reclaiming the commons must therefore rank as a preeminent societal priority.

the CLI recommended the development of “a law of the ecological commons.” See Carolyn Raffensperger, Burns H. Weston, & David Bollier, *Recommendation 1* (“*Define and Develop a Law of the Ecological Commons for Present and Future Generations*,”), in Weston & Bach, *supra* note 12, at 63.