

# **BEYOND ZERO-SUM ENVIRONMENTALISM**

Sarah Krakoff, Melissa Powers, and  
Jonathan Rosenbloom, Editors

ENVIRONMENTAL LAW INSTITUTE  
Washington, D.C.

Copyright © 2019 Environmental Law Institute  
1730 M Street NW, Washington, DC 20036

Cover design by Evan Odoms.

Published May 2019.

Printed in the United States of America  
ISBN 978-1-58576-202-6

# Contents

Author Biographies .....	ix
Introduction .....	xiii
Chapter 1: Why Environmental Zero-Sum Games Are Real, by J.B. Ruhl and James Salzman .....	1
I. Managing Zero-Sum Conflicts .....	4
II. Persuasion and Its Demons.....	6
III. Conclusion.....	9
Chapter 2: Zero-Sum Games in Pollution Control: Ecological Thresholds, Planetary Boundaries, and Policy Choices, by Robin Kundis Craig.....	11
I. Introduction.....	11
II. Pollution, Ecological Thresholds, and Planetary Boundaries.....	16
III. Pollution and Policy Choices to Create Regulatory Zero-Sum Games .....	23
IV. Climate Change and Zero-Sum Pollution Control Games.....	28
Chapter 3: Energy Policy: No Place for Zero-Sum Thinking, by Inara Scott.....	33
I. The Fallacy of the Zero-Sum Game.....	36
A. Zero-Sum Arguments Assume Fixed Data Points .....	36
B. Zero-Sum Games Reflect Ideological Framing.....	38
C. Zero-Sum Framing Turns the Environment Into an Enemy .....	41
II. Avoiding Zero-Sum Games in Energy Policy .....	44
A. Focus on the Big-Picture Goals, Not the Zero-Sum Game.....	44
B. Consider Intersectionality of Energy, Justice, Climate, Race, and Economics.....	49

- C. Reject Standard Characterizations of Villains and Heroes ..... 53
- III. Conclusion..... 55

Chapter 4: The Energy Justice Stakes Embedded in the Net Energy Metering Policy Debates, by Shalanda H. Baker..... 57

- I. Introduction..... 57
- II. The NEM Policy Battlefield ..... 62
  - A. What Is NEM? ..... 63
  - B. NEM Debate: A Zero-Sum Formulation..... 66
  - C. Analytical Approaches ..... 66
- III. The Stakes of NEM..... 70
  - A. Power System Transformation ..... 70
  - B. Masking Energy Inequities..... 77
  - C. Reifying Energy Inequities ..... 81
- IV. Toward a New Framing ..... 82
  - A. Principles of Energy Justice..... 83
  - B. Operationalizing Equity in the Cost of Solar Analysis..... 86
  - C. Designing Successor NEM Regimes ..... 87
- V. Conclusion..... 88

Chapter 5: Gaming Rhetoric and the Complicated Story of Local Identity, by Jonathan Rosenbloom and Keith Hirokawa..... 91

- I. Introduction..... 91
- II. The Language of Local Land Use ..... 95
  - A. Communication in Local Planning ..... 95
  - B. Gaming the Zoning Code..... 97
    - 1. Nonzero-Sum Gaming..... 97
    - 2. Sense of Place and the Insider’s View ..... 100
- III. The Next Dialogue: Local Governance and Ecosystem Services..... 102
- IV. Conclusion..... 108

Chapter 6: Deep Equity, Nonzero-Sum Environmentalism, and a Sustainable Planet, by David Takacs ..... 111

I.	Research Areas at the Forefront of Nonzero-Sum Environmentalism .....	113
A.	Biodiversity Offsetting .....	113
B.	REDD+ .....	114
C.	South Africa and Water as Ecological Infrastructure .....	115
II.	Currencies.....	116
A.	Winners and Losers .....	118
III.	Who <i>Should</i> Lose? .....	120
A.	CBDR .....	120
B.	Preventative and Polluter-Pays Principles.....	122
C.	Intergenerational and Intragenerational Equity.....	123
D.	How the Research Areas Reflect These Principles ...	123
III.	Nonzero-Sum Common Ground on Conservation Priorities .....	125
IV.	Sustainability and Deep Equity.....	129
V.	Conclusion.....	130
Chapter 7: Public Lands and the Public Good: The Limitations of Zero-Sum Frames, by Sarah Krakoff.....		
I.	Introduction.....	133
II.	Creating the “Public” in the Era of Public Lands Conservation.....	137
A.	The Antiquities Act: Eliminating Indigenous Presence While Saving the Indigenous Past.....	139
B.	The Dark Side of Conservation: Eugenics, White Supremacy, and Indian Elimination.....	146
1.	National Parks .....	148
2.	Yellowstone National Park and Blackfeet, Crow, Shoshone, and Bannock Indians .....	149
3.	Grand Canyon National Park and Havasupai Indians.....	152
C.	Tribal Self-Determination and the Dark Side of Conservation’s Persistent Legacy .....	155
III.	Expanding the Public: Bears Ears National Monument ...	157

IV. If Tribes Win, We Lose: Politics in Southern Utah.....	164
V. Conclusion.....	169
Chapter 8: Successful Land Conservation: Neither Zero-Sum Nor Win-Win, by Jessica Owley.....	
I. Introduction.....	173
II. Meanings of Zero-Sum .....	174
A. Game Theory.....	174
B. Zero-Sum Rhetoric .....	175
C. Zero-Sum Land Conservation .....	176
D. Zero-Sum Trumpism .....	178
III. From Zero-Sum to Win-Win .....	180
IV. Some Alternative Approaches: Examples From Land Conservation.....	183
A. Sustainable Development .....	183
B. Payments for Ecosystem Services.....	184
C. Management Plans and Certification Schemes .....	186
D. Conservation Easements.....	188
V. Conclusion.....	190
Chapter 9: Competitive Federalism: Environmental Governance as a Zero-Sum Game, by Shannon Roesler.....	
I. From Cooperative to Competitive Federalism .....	194
II. Is Zero-Sum Governance Grounded in the Constitution or Federalism Values? .....	197
A. Federalism: Legal Doctrine.....	197
1. State Challenges to the Clean Power Plan .....	198
2. State Challenges to the WOTUS Rule.....	199
B. Federalism Values.....	203
III. State Motivations.....	206
A. A Response to Burdens on State Institutions?.....	206
1. Costs of the Clean Power Plan .....	206
2. Costs of the WOTUS Rule.....	207
B. Zero-Sum Governance: The Polarization of Politics and Influence of Organized Interests .....	209

IV. The Consequences for Public Welfare and Democracy...	215
V. Conclusion.....	217
Chapter 10: Zero-Sum Climate and Energy Politics Under the Trump Administration, by Melissa Powers .....	219
I. Introduction.....	219
II. The Trump Administration’s Zero-Sum Energy and Climate Agenda .....	223
A. The Trump Administration’s Actions on Climate and Energy .....	224
1. Repudiation of International Climate Agreements .....	224
2. Regulatory Repeals.....	225
a. The Clean Power Plan Repeal.....	225
b. Vehicle Emissions and Fuel Economy Standards .....	226
c. Rollbacks of Regulations Governing Fossil Fuel Development.....	228
3. Fossil Fuel Development and Market Disruptions .....	229
B. The Zerosumness of the Trump Administration’s Climate and Energy Policies .....	231
III. The Consequences of the Trump Zero-Sum Climate and Energy Agenda.....	235
A. Lost Opportunities to Mitigate Climate Change....	236
B. Impacts on Markets and Policy.....	238
1. Investment and Deployment .....	238
2. Extended Infrastructure and Emissions Lock-In.....	241
3. Regulatory Stickiness.....	242
C. Political Consequences .....	244
IV. An Energy Transition Strategy With More Winners and Fewer Losers .....	246
V. Conclusion.....	251
Index .....	253





## Author Biographies

**Shalanda H. Baker** is a Professor of Law, Public Policy and Urban Affairs at Northeastern University. Professor Baker is an affiliate faculty member in Northeastern's Global Resilience Institute and Department of Political Science. Before joining Northeastern's faculty, Professor Baker spent three years as an associate professor of law at the William S. Richardson School of Law, University of Hawai'i, where she was the founding director of the Energy Justice Program.

**Robin Kundis Craig** is the James I. Farr Presidential Endowed Professor of Law at the University of Utah S.J. Quinney College of Law in Salt Lake City, Utah. She is also affiliated faculty of the College of Law's Wallace Stegner Center for Land, Resources, and the Environment and the University's Global Change and Sustainability Center. Her scholarship focuses on climate change, resilience theory, water allocation and quality, and ocean and coastal law.

**Keith Hirokawa** joined the faculty at Albany Law School in 2009. He teaches courses involving environmental and natural resources law, land use planning, property law, and jurisprudence. His scholarship explores convergences in ecology, ethics, economics, and law, with particular attention given to local environmental law, ecosystem services policy, watershed management, and environmental impact analysis.

**Sarah Krakoff** is the Moses Laskey Professor of Law at the University of Colorado Law School. She teaches and writes about American Indian law, natural resources law, and environmental justice. In 2018, she was awarded the University of Colorado's Hazel Barnes Prize for her distinguished record of research and teaching and the Chase Community Service Award for her pro bono work with low-income communities.

**Jessica Owley** is a Professor of Law and Environmental Law Program Director at SUNY Buffalo School of Law. Her research focuses on land conservation, climate change, and property law. Prior to joining the academy, she practiced Land Use and Environmental Law in California. She is one of the

co-founders of the Environmental Law Collaborative and excited to be part of this project.

**Melissa Powers** is a Jeffrey Bain Faculty Scholar and Professor of Law at Lewis & Clark Law School, and she was a Fulbright-Schuman Scholar in 2014-2015 researching Denmark and Spain's renewable energy laws. Melissa is also the founder and director of the Green Energy Institute at Lewis & Clark Law School, an organization that designs strategies to a transition to a zero-carbon energy system.

**Shannon Roesler** is the Robert S. Kerr Jr. Professor of Natural Resources and Environmental Law at the Oklahoma City University School of Law. She teaches Environmental Law, Land Use, Legislation, and Property. Her scholarship focuses on issues of environmental justice, environmental governance, climate change litigation, and science communication and the law.

**Jonathan Rosenbloom** is the Dwight D. Opperman Distinguished Professor of Law at Drake Law School. His scholarship explores issues relevant to local governments and sustainability, with a particular focus on land use. He is the founding director of the *Sustainable Development Code*, a model land use code providing local governments with the best sustainability practices in land use.

**J.B. Ruhl** is the David Daniels Allen Distinguished Chair of Law at Vanderbilt University Law School. His research and scholarship focus on the law and policy relating to endangered species, ecosystem management, adaptive governance, ecosystem services, resilience theory, and complex adaptive systems.

**Jim Salzman** is the Donald Bren Distinguished Professor of Environmental Law with joint appointments at UCLA Law School and the UC, Santa Barbara, School of Environment. In nine books and more than 90 articles and book chapters, his broad-ranging scholarship has addressed topics spanning drinking water, policy instrument design, and environmental markets.

**Inara Scott** is the Gomo Family Professor and Assistant Dean for Teaching and Learning Excellence in the College of Business at Oregon State University.

**David Takacs** is Professor of Law at University of California Hastings College of the Law in San Francisco. He holds a J.D. from UC Hastings, LL.M. from the SOAS University of London, and a B.S. (Biology), M.A. and Ph.D. in Science & Technology Studies from Cornell University. His research interests include REDD+, biodiversity conservation law, the public trust doctrine, and the human right to water. He is the author of *The Idea of Biodiversity* (Johns Hopkins Univ. Press).



# Introduction

*Sarah Krakoff, Melissa Powers,  
and Jonathan Rosenbloom*

*“Protecting the environment can only occur at the expense of: jobs, economic growth, population increase, anti-poverty measures, food production, etc.”* This type of expression has been around as long as there have been efforts to reign in pollution and ensure the vitality of natural systems. Behind it are a variety of concerns, including resistance to government regulation, skepticism about the importance or extent of environmental harms, and sometimes even pro-environmental views about the limits of Earth’s carrying capacity.

When the Environmental Law Collaborative (ELC) met for its third biennial meeting (ELC3) in the summer of 2016, President Donald Trump had secured the Republican Party’s nomination but had not yet won the presidential election. We could not foresee the extent to which acrimonious and divisive language would be used to further the Trump Administration’s policy goals. We did not know, in other words, that zero-sum rhetoric and a winners-versus-losers view of the world would dominate discourse about public policy and governance. It was therefore coincidental that we had already set out to tackle the origins and meanings of zero-sum frameworks and assess their implications for natural resource and environmental protection. Since the election, the Trump Administration’s rationales for a host of environmental and natural resources policies have embraced a zero-sum approach, seemingly preferring a world divided into winners and losers. Accordingly, many of our writings, which mostly occurred after the election, interrogate and analyze the Trump Administration’s actions. Other chapters address how zero-sum rhetoric gained ascendance in the first place, and why it often obscures the values underlying conflicts about environmental protection.

As several authors explain, one problem is that many zero-sum characterizations have very little to do with the original meaning of a “zero-sum” game. In game theory, zero-sum means that a person may gain only at the expense of another person losing. Two-person games, such as chess and checkers, exemplify this win/loss dichotomy. Transported to economics, the idea of zero-sum similarly means that one party must lose for another to win. But, contrary to the common way the term is used, zero-sum outcomes are

not inevitable results from zero-sum games. Rather, economists believe that parties will negotiate agreements to avoid zero-sum outcomes. The looming zero-sum state helps incentivize win-win negotiations; once negotiations reach a point that one party can gain only if another loses, the negotiations will be deemed to have reached their “Pareto-optimal” state and conclude with winners emerging on both sides. A winner-loser outcome, under this theory, is the result of failed bargaining; it is not the preordained consequence. Further, if a zero-sum point is reached and the outcome is not desirable, the next step in the game can be to see if there is any way to redefine the parameters to achieve more widespread satisfaction.

Of course, many games, economic transactions, and negotiations are much too complex to describe in zero-sum terms. Even something as simple as a board game designed to end with one winner and several losers could produce complex outcomes depending on the underlying desires of the players. If the game ends quickly, the putative winner may feel disappointed about no longer being able to play, while one of the “losers” might be delighted to be free from the shackles of the game she hadn’t wanted to play in the first place. This simple example illustrates the folly of describing most—perhaps nearly all—environmental and natural resources challenges in zero-sum terms.

This folly extends beyond the misapplication of the zero-sum concept. Economic theories in general have often been over-applied in the environmental, natural resources, and energy spheres. For example, many environmental laws are implemented according to assumptions grounded in rational choice theory, which treats individual humans as rational economic actors (*homo economus*) who make their decisions only after weighing the costs and benefits (about which they somehow have full knowledge) of taking certain actions. By designing laws around the mistaken belief that humans (and the businesses they run) act as rational economic actors, policymakers often design or implement laws that are incapable of accommodating economically “irrational” decisions that humans make anyway.

There is a deeper problem as well. Not only is the description of people as rational self-interest-maximizing actors largely inaccurate; it also obscures more compelling understandings of human nature. It is one thing to describe people as motivated by rational self-interest in contexts that involve objects of fungible value with low or no stakes, such as, for example, an actual game of checkers. It is another to describe people as rationally self-interested, and then take the further step of adopting laws and policies that assume that people *should* behave that way, when the underlying contexts involve complex moral, ethical, or aesthetic values. The perpetuation of rational choice

theory's narrow utilitarianism blocks broader discussions about how people have complicated and often incommensurable motivations, especially when the stakes are high. Those motivations include desire for belonging, moral values, and aesthetic beliefs, among others. The creep of zero-sum rhetoric, as well as rational choice frameworks more broadly, crowd out discussions about this broader set of motivations. Zero-sum views of the world also preclude from the outset the notion that what we should strive for is collective wellbeing, rather than "Pareto optimality" among arms-length individuals.

This book interrogates the application of zero-sum rhetoric and approaches in our environmental, natural resources, and energy laws. The authors have different angles on the usefulness and limitations of zero-sum framing, but all go beyond the oversimplified view that environmental protection always imposes a dead loss on some other societal value. The first two chapters recognize the reality of zero-sum dynamics in some circumstances. In Chapter 1, J.B. Ruhl and Jim Salzman provide an overview of the zero-sum theory and then apply that theory to certain environmental trade offs that, by their nature, require zero-sum outcomes. Only by acknowledging the zero-sum nature of the conflicts at issue, they argue, can society develop equitable solutions that will compensate the "losers." In Chapter 2, Robin Craig similarly accepts that some scenarios are zero-sum, due to the Earth's planetary boundaries. As she explains, humanity's consumption of the Earth's resources has pushed many systems to their ecological thresholds, or zero-sum state.

While the first chapters accept that there are indeed aspects of environmental protection that have reached a zero-sum state, other chapters argue that the idea of zero-sum has been misapplied. Inara Scott and Shalanda Baker both contend that the energy sector is one of these contexts. In Chapter 3, Scott argues that energy policy as a whole provides multiple opportunities for win-win outcomes. In Chapter 4, Baker explains how zero-sum thinking focused on the near-term costs of net metering has led policymakers and utilities to ignore the broader energy injustice concerns associated with continued use of fossil fuels and existing electricity systems. Similarly, in Chapter 5, Jonathan Rosenbloom and Keith Hirokawa argue that zero-sum descriptions fail to capture the values at play in local and land use planning processes. Much more than bargaining around rational self-interest, the participants in local land use decisions are motivated by identity and attachment to place. This suggests that different approaches are warranted to arrive at durable and sustainable place-based solutions. David Takacs also puts the values at stake front and center in Chapter 6, where he describes three examples of sustainable and just natural resource management that produce benefits for all. To

the extent that there are “losers,” Takacs argues, the losses are justified by broader commitments to equity and environmental protection.

In Chapters 7 and 8, Sarah Krakoff and Jessica Owley tackle the limitations of zero-sum framings in the public lands and natural resources contexts. Krakoff’s chapter takes an historical approach to public lands protections, recounting that many early conservation policies erased the presence and views of Native peoples. She argues that contemporary attempts to assess conservation trade offs ignore this dark side of conservation history and substitute facile winner-loser assessments for deeper discussions about justice. Owley assesses zero-sum and win-win rhetoric in the context of conservation easements and other instruments that purport to avoid trade offs in land protection policies. Owley relies on the history of justifications for conservation to expose the problems with describing value-laden choices in game-theoretic vocabulary.

The last two chapters discuss the hazards of treating federal environmental and energy law as a zero-sum game. In chapter 9, Shannon Roesler analyzes the obstructionist approach that some states have taken to environmental enforcement, and assesses the costs to the public good of creating winners and losers in environmental protection. Melissa Powers assesses the Trump Administration’s energy policies and its full-throated embrace of the “we win, you lose” attitude toward politics and governance. She ends her chapter by proposing robust environmentally protective and greenhouse gas reducing goals, which would benefit broad segments of society today as well as future generations. While that approach may not gain traction immediately, it is consistent with the goals of this volume, which are to think beyond the fractious politics of the moment and propose ideas for a world beyond zero-sum environmentalism.

This book is part of a larger body of work authored by ELC, an affiliation of environmental law professors that began in 2011. Since the ELC’s creation, it has engaged in three significant series of collaborations. The first arose out of the ELC’s initial meeting in July 2012 in Chester, Connecticut. Over three days, the ELC participants discussed the meaning of sustainability in the face of climate change and published, *Rethinking Sustainability to Meet the Climate Change Challenge* (ELI Press 2015). At ELC2 at the Teton Science School in 2014, the participants discussed the relationship between law and the Intergovernmental Panel on Climate Change’s Fifth Assessment Report and, ultimately, published *Contemporary Issues in Climate Change Law and Policy: Essays Inspired by the IPCC* (ELI Press 2016).



ELC founders Profs. Keith Hirokawa and Jessica Owley describe the origins and purpose of ELC in the following paragraphs:

Inspired by early conferences at Airlie House (particularly the 1969 conference that gave birth to the Environmental Law Institute), the group created a forum to bring together our fellow researchers to discuss and make progress on pressing environmental concerns. The ELC seeks to foster progress toward an adaptive, conscious, and equitable governance of actions that impact local and global ecologies by engaging the contemporary discourse. To advance society and secure welfare, locally and globally, we must be prepared to face divisive issues that confront our environment. Assuming our strength lies in the democratic development and confirmation of values and priorities, our citizenry must be willing and capable of understanding the circumstances and alternatives that face our natural surroundings. It has become increasingly apparent that although environmental policy is benefited by a robust drive for the dissemination of information, environmental policy is also influenced by strategic misinformation and effective use of persuasive communication.

The ELC facilitates dialog among thought leaders on sustainable policy priorities, practical implementation strategies, assessment mechanism, and cooperative analysis of science, economics, and ethics. The core functions served by this group are: (1) collaborative research and analysis of law and policy questions that implicate the integrity of ecosystems; (2) production of literature that reflects the insights from the collaboration and makes laws and policy recommendations that may be targeted to specific entities or for broad-based consideration; and (3) effective dissemination of work product when and where it may produce meaningful and considered action.<sup>1</sup>

We believe that ELC3's zero-sum theme, and this publication, exemplify the importance of ELC's mission. The authors of the chapters in this book have different perspectives and areas of expertise. We may not always reach similar conclusions, but we do always gain insights and new understandings when we convene, converse, and collaborate. We hope that this collection could spur new ways of engaging in environmental policy development and implementation, much as the ELC process has spurred new approaches in our research and teaching.

---

1. Jessica Owley & Keith Hirokawa, *Preface*, in *RETHINKING SUSTAINABILITY TO MEET THE CLIMATE CHANGE CHALLENGE* (ELI Press 2015).

