

#### **BEYOND ENVIRONMENTAL LAW**

This book offers a vision for the third generation of environmental law designed to enhance its ability to protect our environment. The book presents two core proposals, an Environmental Legacy Act, to preserve a defined environmental legacy for future generations, and an Environmental Competition Statute, to spark movement to new clean technologies. The first proposal would require, for the first time, that the federal government define an environmental legacy that it must preserve for future generations. The second would establish a market competition to maximize environmental protection. The balance of the book provides complementary proposals and analysis. The first generation of environmental law sought broad protection of health and the environment in a fairly fragmented way. The second sought to enhance environmental law's efficiency through cost-benefit analysis and market mechanisms. These proposals seek to create a broader, more creative approach to solving environmental problems.

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## Beyond Environmental Law

# POLICY PROPOSALS FOR A BETTER ENVIRONMENTAL FUTURE

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For John

-A.C.F.

For Kim, Mai, and Mirrah

-D.M.D.



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2008); "Regulating Evolution for Sale: An Evolutionary Biology Model for Regulating the Risks Posed by Genetically Modified Organisms" (*Wake Forest Law Review* 2007); and "Embracing Uncertainty, Complexity and Change to Protect Ecological Integrity: An Eco-Pragmatic Reinvention of a First Generation Environmental Law" (*Ecology Law Quarterly* 2006). Angelo received her J.D. and M.S. from the University of Florida and her B.A. from Rutgers University.

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#### **Preface**

This book sets forth concrete proposals and ideas to guide the next generation of environmental law. The first generation of environmental law aimed to fully protect public health and the environment. It did so mostly through very detailed statutes and accompanying standards. This generation of law succeeded in meeting some of its goals and sparked significant progress toward meeting the rest. But it spawned an extraordinarily complex system that proved more difficult to implement than its creators had anticipated. Moreover, most of these statutes required that agencies prove harm before regulating, and many natural resource management statutes gave agencies broad discretion to balance competing values. Uncertainty and the broad discretion accorded agencies limited these statutes' success in achieving their stated goals.

We are nearing the end of a second generation of environmental law. This second generation carried out regulatory reforms ostensibly guided by a desire for economic efficiency. These reforms included greater reliance on cost-benefit analysis (CBA) to choose the goals of environmental law and market-based mechanisms as methods for achieving those goals. Although this approach enjoyed some successes, the CBA part of the agenda proved disastrous. By taking an insufficiently precautionary approach, the United States failed to act in a timely manner on global warming, which proved a much greater menace than economists and opponents of action had anticipated. CBA, while ostensibly aimed at rationalizing environmental law, usually simply provided a cover that allowed regulated polluters and ideologues favoring their interests to paralyze regulation.

The next generation of environmental law should build on the positive aspects of both of the previous generations of reform. It should embrace the

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precautionary approach of the first generation while embracing the second generation's goal of stimulating private markets to protect the environment. But we must address the shortcomings of the first generation and choose reforms that promise more vigorous protection of the environment, not less.

This book contains two parts. Part I focuses on a proposal to conserve public natural resources through the "National Environmental Legacy Act." Part II focuses on a proposal to stimulate positive technological changes through an "Environmental Competition Statute." Both parts explore related ideas and information to aid appreciation for how we can conserve our environment and stimulate appropriate technological progress. We see these two parts as complementary, since society needs both conservation of the good and progress toward something better.

Part I begins with a chapter describing its centerpiece proposal: the National Environmental Legacy Act (the Legacy Act). This statute would require us to define in concrete terms for the first time the environmental legacy we wish to leave to future generations and would provide a mechanism for systematically evaluating whether important decisions regarding public resources are consistent with preserving that legacy. At the same time, it would achieve the desirable goal of improving our ability to assess how our decisions are affecting our own future and whether they are consistent with our goals and priorities. As such, the statute would provide a tool to help us achieve the goal of sustainable use of our resources that is embodied in many of our current statutes but honored most often in the breach.

The Legacy Act concept draws on the lessons learned in more than thirty years of experience under the National Environmental Policy Act and the many other statutes by which we have sought to conserve both the quality and the quantity of our natural resources. A central lesson has emerged consistently from our experience under these statutes, and this lesson forms the cornerstone of the Legacy Act: we cannot reliably protect a natural resource legacy without a strong and enforceable substantive mandate. The chapter demonstrates how the Legacy Act would overcome the problems that have plagued our effort to achieve sustainable use of resources to date. The remaining chapters of Part I describe important ideas that undergird or support the Legacy Act concept or challenges that the Legacy Act must address.



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Professor Shapiro focuses on administrative process and the key role it plays in our efforts to achieve sustainability. The chapter emphasizes the historical successes of citizen enforcement and describes three obstacles to enforcement by regulatory beneficiaries. Professor Shapiro describes the limitations that the courts' interpretations of standing and ripeness doctrines, as well as the courts' treatment of agency inaction, have imposed on that success. He then suggests legislative strategies to overcome these limitations in the design of the Legacy Act and argues that the Supreme Court should revisit and reverse recent and unwarranted interpretations of both standing and ripeness requirements.

Professor Ankersen and Kevin Regan write about the "shifting-baselines phenomenon," which both demonstrates the need for the Legacy Act and suggests a pitfall that it must help us to avoid. Humans' perception of normal or baseline environmental conditions can shift dramatically over time, and successive generations may not appreciate the degraded state of what they perceive as pristine and functional ecosystems. Ankersen and Regan explore the shifting-baselines phenomenon and the potential contours of the Legacy Act in terms of the ecologies of restoration, resilience, and reconciliation. They argue that the Legacy Act must encourage the restoration of already-degraded resources and ensure ecosystem resilience in the face of reasonably anticipated anthropogenic change. They also suggest that it is necessary to coordinate the Legacy Act's goals with broader landscape-level conservation efforts, including the accommodation of ecosystem functions, processes, and services on private lands. The chapter emphasizes the importance of restoring human ecological knowledge to prevent intergenerational ecological amnesia and to ensure the transfer of an environmental legacy.

Professors Brown and Angelo focus on an approach to analyzing the impact of decisions on natural ecosystems that could be applied as a central analytic tool to implement the Legacy Act's goals – emergy synthesis. Emergy synthesis is a quantitative method of valuation that relies on the intrinsic value of a resource or the services it provides. A core strength of the emergy approach is that, although it is quantitative, it does not require assigning an economic value to natural resources, which have both quantifiable and hard-to-quantify values. The latter are notoriously difficult to measure using standard economic techniques that rely primarily on determining



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consumer willingness to pay for the resource. Emergy analysis focuses on the energy embodied in the resource rather than trying to quantify the monetary value of the resource based on consumer preferences. Although emergy may not offer a complete picture of the value of the resources, it illustrates one promising technique that may play an important role in developing a more comprehensive method for assessing the value of natural resources to replace the outdated and inadequate cost-benefit framework. Thus, this chapter also illustrates more broadly the value of exploring some of the many newer approaches to analyzing environmental impacts and synthesizing available information.

Professors Overdevest and Mayer's chapter offers suggestions on how to design the information collection and dissemination components of the Legacy Act. They use a case study of bucket brigades – community-based air-quality monitoring and diffusion organizations that have developed across the country – to illustrate how the power of information is enhanced by creating incentives that engage both government and civil society in the process of collecting and sharing information. The case study suggests how engaging nongovernmental organizations and citizens with government oversight and monitoring can enhance both the information available and accountability. The authors' analysis suggests that an approach that collects and diffuses information at multiple administrative levels is more adaptive and functions more robustly in a climate where complexity and dynamism render complete information impractical. It also highlights areas in which further research is needed to fully understand the institutional dynamics.

Professor Rosenbaum also looks at information dissemination and offers recommendations on how the Legacy Act could ensure that the most effective use is made of information collected. The chapter begins by discussing three issues in the design and implementation of the Legacy Act that are of fundamental importance to achieving this goal: the process used to establish substantive standards, the treatment of uncertainty, and the selection of environmental indicators for baselines and monitoring. Professor Rosenbaum emphasizes that data collected under the Legacy Act must have policy relevance and be publicly accessible. The chapter also explores how the Legacy Act can both inform conservation efforts at the state and local levels and how those designing the Act can learn from these other levels of government. Professor Rosenbaum concludes by articulating



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the double standard of scientific appropriateness and policy relevance that information generated under the Legacy Act must meet.

Professor Steinzor argues for establishing a broader constitutional foundation for federal conservation efforts and details how a broader foundation may enhance the credibility and respect accorded a statute such as the Legacy Act. Although a broader constitutional foundation may not be essential to the Legacy Act, it may permit the statute to address a broader range of activities. The Property Clause of the Constitution provides a firm basis for regulating activities affecting the many natural resources found on federal lands, but this chapter explores the basis for conserving the quality of resources, such as air, water, wetlands, and endangered species that cannot be protected solely by regulating activities on publicly owned lands. The chapter outlines the impact of relying on the Commerce Clause as the sole basis for federal environmental protection. Professor Steinzor traces the evolution of Commerce Clause jurisprudence and its implications for environmental protection. She then traces constitutional foundations of the federal power to protect the public health, safety, and welfare. On the basis of this history, Professor Steinzor presents the core argument for relying on the Constitution's General Welfare Clause as affirmative constitutional authority for environmental, health, and safety legislation.

Part II begins with a discussion of its centerpiece proposal, an Environmental Competition Statute. This proposal seeks to promote competition among firms to maximize environmental protection. It seeks to emulate the dynamics of continuous improvement that characterize some highly competitive markets rather than the hypothetical efficiency that economists attribute to free markets to facilitate modeling exercises. It also seeks to relieve regulators of the responsibility to determine the limits of feasible protection by using the best performance from polluters as the benchmark others must meet to escape liability. The timidity of regulators has usually limited the efficacy of both traditional regulation and emissions trading approaches. This timidity also limits the efficacy of pollution taxes, as government officials must choose tax rates. The Environmental Competition Statute seeks to engage the creativity of the private sector directly rather than rely on government officials to set standards and tax rates.

An Environmental Competition Statute accomplishes this in a fairly simple way. It provides that anybody who makes an environmental improvement may collect the cost of making this improvement from competitors



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that pollute more, plus a premium preset by statute. This sets up a competition, a race to the top, in which those who perform best collect money and those who perform worse pay their cleaner competitors. This mimics the dynamics of markets, in which firms that innovate may capture market share from competitors so that they, in effect, take money from their less innovative competitors. This approach makes the achievements of the most environmentally capable firms rather than the timid actions of government bureaucrats the driver of environmental improvement. The discussion of the Environmental Competition Statute also explains why emissions trading and pollution taxes have proved fairly weak stimulators of environmental innovation and why such innovation is important. The remaining chapters provide additional justifications for the Environmental Competition Statute and champion some policies that will complement it in the next generation of environmental law.

Professor Adelman discusses a key premise of the Environmental Competition Statute - promoting technological innovation. The Environmental Competition Statute, of course, is premised on the notion that the private sector has great unused capacity to advance environmental technology, and it seeks to use competition to improve the environment as a means of bringing that capacity to the fore. Professor Adelman explores the level of government at which an Environmental Competition Statute can be most effectively implemented. He demonstrates that promoting innovation is a distinct regulatory end that is itself subject to a market failure – technology spillovers. Using efforts to address climate change as an illustration, Professor Adelman shows how failure to recognize technological innovation as a distinct regulatory end often leads policy makers to overlook the value of state and local regulation to complement federal regulatory efforts. The chapter then examines in detail the market dynamics that affect technological innovation and concludes that both state and federal governments can effectively implement a statute, such as an Environmental Competition Statute.

Professor Tomain offers a metaphor and vision for a transformation of the electric utility industry – the iUtility – and illustrates how an Environmental Competition Statute would be congruent with this vision. The chapter begins by describing today's electric utility industry, its history of regulation and deregulation, the critical function played by rate making, and the adverse consequences of this approach. Then Professor Tomain sets out a



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vision for a new regulatory compact based on the core ideas that animate the Environmental Competition Statute. He describes how a new approach to rate making and renewable portfolio standards can transform the industry and promote innovation.

In the concluding chapter, Professor Klein identifies a unified values framework that draws on values strongly associated with America's history and national character to support environmental sustainability and technological innovation. The chapter begins by describing the deep connection between patriotism and Americans' connection to the land. Professor Klein then surveys the evolution of environmental law, illustrating how both the first and second generations of environmental law embody the core American values of optimism, strength, and thrift. Building on this common foundation, Professor Klein dubs this framework "environmental patriotism." The chapter explores relevant metaphors associated with the values framework that can be used to support reforms that advance sustainability and examines how and why these metaphors are a critical tool in helping the public to understand the broad and profound implications of the decisions we make about the environment. Professor Klein details how the values framework and associated metaphors can help to educate the public about the meaning of both the Environmental Legacy Act and the Environmental Competition Statute, enrich public debate about the proposed statutes, and enlist a broad base of allies to support these two legislative initiatives.

We offer these two key reforms, the National Environmental Legacy Act and the Environmental Competition Statute, as cornerstones for the next generation of environmental law. They represent an attempt to grapple honestly with both the positive and the negative lessons from the first two generations of environmental law. We hope that these two ideas will receive support. But we also hope that they highlight the need for the next generation of environmental law to more comprehensively conserve our environmental legacy while simultaneously stimulating the deployment of technological advances that both promote conservation and meet our economic development needs. The analysis offered here supports these reforms but may stimulate further ideas. We welcome additional proposals on how the next generation can do better than the previous two in meeting these twin goals.



### **Acknowledgments**

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