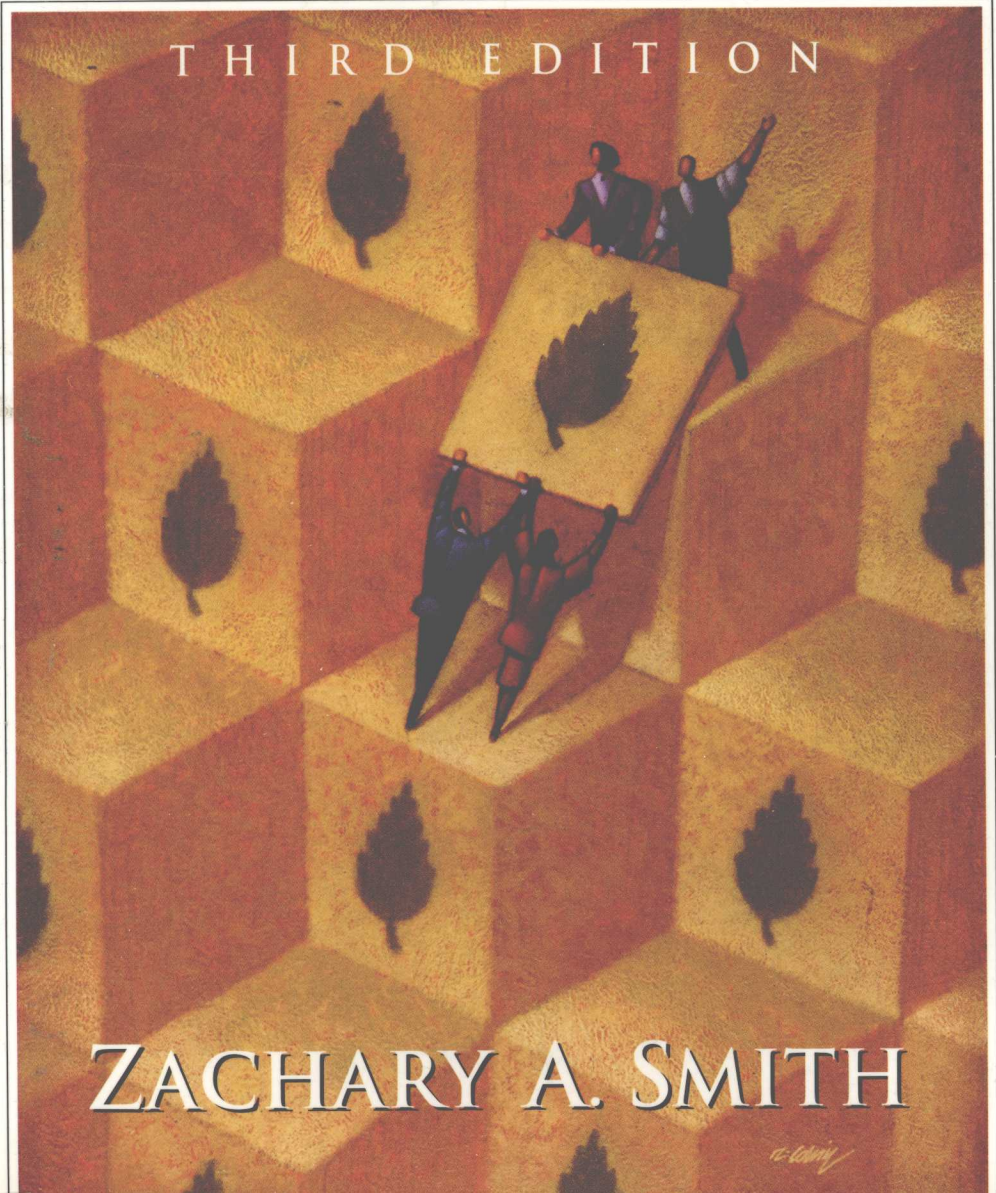


# THE ENVIRONMENTAL POLICY PARADOX

THIRD EDITION



ZACHARY A. SMITH

third edition



# THE ENVIRONMENTAL POLICY PARADOX

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# PREFACE

The policy-making process described in many public policy and American government texts shows just the tip of the iceberg. This book, designed for courses on environmental policy, environmental studies, and public policy, and as supplemental reading in American government and public administration courses exposes the rest of the iceberg: the workings of government that are rarely visible but necessary for an appreciation of the formation of environmental policy. It examines environmental policy in the United States in air, water, land use, agriculture, energy, waste disposal, and other areas, and, in so doing, provides an introduction to the policy-making process in the United States.

A paradox is an apparently contradictory combination of opposing ideas. The paradox of environmental policy is that we often understand what the best short- and long-term solutions to environmental problems are, yet the task of implementing these solutions is either left undone or is completed too late. Although this is a general characteristic of policy formation in the United States, it is particularly true of environmental policy. The explanation lies in the nature of the policy-making process. A few broad examples will illustrate the nature of the environmental policy paradox.

Problems in regard to farming and food production in the United States include the loss of topsoil due to soil erosion, the loss of soil productivity, and the overuse of pesticides and fertilizers. Although opinions vary, there is strong evidence that a shift to organic farming would increase farm income and reduce soil erosion and nutrient depletion while meeting American food needs

and reducing oil imports. Most people who study the matter feel we would be better off in the long run converting to organic farming. However, regardless of the potential benefits of organic farming, the incentives operating on policy makers in the policy-making process, which include, for example, the money and influence of the manufacturers of pesticides, make it difficult to make significant changes in U.S. farm policy. That is what we call a paradox of environmental policy.

Energy provides another good example. Although estimates vary as to how long fossil fuels will last, there is widespread agreement that a transition must be made from fossil to renewable fuels. This transition will have a significant impact on our economic, social, cultural, and political lives. This paradox is that today little is being done in the public sector to prepare for this change.

Finally, one of the most dramatic examples of the paradox is in the management of solid waste. The total amount of solid waste produced in the United States from all sources amounts to an average of 327.5 million tons a year. Roughly 62 percent of the solid waste generated in the United States is deposited in sanitary landfills; only 28 percent is recycled. For several decades we have understood and could have anticipated most of our solid waste problems. Paradoxically, largely because of political considerations, little has been done to address the problem.

Any examination of environmental policy must begin with a discussion of the setting in which policy is formulated. No simple explanations or definitions can completely convey why a given policy does or does not come into being. Limitations on human comprehension, as well as in the quality and extent of information available, make it difficult to fully understand the cause-and-effect relationships in public policy formation.

This book, nevertheless, provides a basic understanding of why some environmental ideas shape policy whereas others do not. We describe the formal institutional setting in which environmental policy is developed, the major participants involved, and the political and institutional incentives that motivate those attempting to influence the policy-formation system. Through an understanding of the informal political and institutional incentives that influence policy formation, the reader will be able to see that the system, though complex and uncertain, does respond to appropriate inputs. It is important to know how the system works because only when we understand how the game is played can we make changes in the system.

## ORGANIZATION

The book is divided into two parts. Part One, *The Policy-Making Process*, provides an overview of how governmental policy is made in the United States. It emphasizes informal and noninstitutional aspects of the process and the incentives in the policy-making process that direct participant behavior. Also, Part One examines the rise of environmental-based litigation in the United

States. Specifically we discuss the legal processes that come into play when citizens pursue environmental policy goals in the courts. This is an important consideration because, as we will see, often the courts are the only policy avenue available to groups, such as many environmental groups, which lack the resources needed to have influence in other policy-making arenas—like legislative bodies.

Before delving into the policy-making process in environmental policy, however, Chapter 1 introduces ecosystems and the study of ecology, thus setting the stage for the chapters that follow. Good environmental policy is based on an understanding of how the physical environment works. Chapter 1 also provides a general discussion of the interdependence of ecosystems and explains the need to evaluate environmental policy from a multidisciplinary perspective. The complexity of ecosystem interdependence requires, in many cases, an international or global perspective.

Chapter 2 explores the relationship of our dominant social paradigm (those clusters of Western cultural beliefs, values, and ideals that influence our thinking about society, government, and individual responsibility) to environmental policy formation. The chapter also summarizes the history of the environmental movement and public opinion about environmental problems—two important components of the Western industrial dominant social paradigm.

Chapter 3 examines the regulatory environment in the environmental policy area. This discussion includes an examination of the current regulatory framework in the United States, various regulatory alternatives that have been suggested, and some of the assumptions that underlie current thinking about appropriate environmental regulations.

Chapter 4 examines the institutional setting of the policy-making process. The incentives operating on participants in the process and the role of interest groups are discussed along with advantages certain policy-making participants enjoy when attempting to influence environmental policy. These incentives include the short-term incentives available to policy makers for evaluating policy options; incentives or disincentives in dealing with externalities (i.e., those costs or benefits of a course of action not directly involved in the policy); the status quo orientation of the system; the role of subgovernments or “iron triangles” in certain policy areas; and the incremental nature, in most cases, of policy formation in the United States. Chapter 4 also describes more formal means of environmental control, such as the requirement of an environmental impact statement, or EIS, and introduces the administrative agencies most involved in environmental administration in the United States. Finally, the effects of environmental litigation on the system are examined and the environmental laws governing environmental policies are discussed throughout Part Two of the book.

In Part Two we examine environmental policy in seven chapters that discuss air pollution, water pollution, energy policy, solid and hazardous waste policy, land management, international environmental problems, and international

environmental management. In each area there are current policies that do not effectively address the problems they were meant to deal with. This is true even though experts are often in agreement about what needs to be done. As a result, the paradox of environmental policy is that the system often produces policies that are fundamentally unable to address environmental problems adequately. We will examine these policies.

It is my hope that after reading this book you will have a better understanding of environmental problems, the system that produced these problems, and what you can do to help produce a better future. There is much you can do when you understand how the system works.

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Many people provided guidance and support for this project, for the first, second, and now third editions. Early on I asked for input on the topics to be covered and the treatment afforded each topic. I want to thank Richard C. Allison, Richard N. L. Andrews, Mary Timney Bailey, C. Richard Bath, James S. Bowman, M. Paul Brown, Gary Bryner, Susan J. Buck, John A. Busterud, Jerry W. Calvert, Henry P. Caulfield, Jr., Jeanne Nienaber Clarke, Bruce Clary, Barbara Coe, Hanna J. Cortner, W. Douglas Costain, John Crow, Paul J. Culhane, Kenneth A. Dahlberg, Ralph C. D'Arge, Clarence J. Davies, David Howard Davis, Riley E. Dunlap, Robert E. Eagle, Sheldon M. Edner, Ward E. Elliott, John G. Francis, John C. Freemuth, William Green, Forest Grieves, George M. Guess, Marjorie Randon Hershey, Sandra K. Hinchman, William W. Hogan, John D. Hutcheson, Jr., Susan Hunter, Harold C. Jordahl, Jr., Lauriston R. King, John Kingdon, Michael E. Kraft, Henry Krisch, Berton L. Lamb, Kai N. Lee, James P. Lester, Harvery Lieber, Daniel R. Mandelker, Dean E. Mann, David L. Martin, Albert R. Matheny, Daniel McCool, Stephen P. Mumme, Charles S. Pearson, John Duncan Powell, Barry G. Rabe, James L. Regens, Mark E. Rushefsky, William Russell, Dean Schooler, Ronald G. Shaiko, Gilbert B. Siegel, J. Allen Singleton, Henry B. Sirgo, Nancy Paige Smith, Dennis L. Soden, Marvin S. Soroos, Peter G. Stillman, Lawrence Susskind, Dennis Thompson, Richard Tobin, Evert Vedung, Norman J. Vig, Lettie M. Wenner, and Clifton E. Wilson for their valuable suggestions. Several others, notably government officials, desired anonymity. Because they know who they are, I thank them just the same.

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I, of course, hold all of the above blameless for the results.

*Zachary A. Smith*



# ABBREVIATIONS

AEC	Atomic Energy Commission
AQCRs	Air Quality Control Regions
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFCs	Chlorofluorocarbons
COET	Crude Oil and Equalization Tax
CWA	Clean Water Act
DOE	Department of Energy
DOI	Department of Interior
DSP	Dominant social paradigm
EA	Environmental Assessment
ECE	United Nations Economic Commission for Europe
EEC	European Economic Community
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ERC	Emission Reduction Credit



ERDA	Energy Research and Development Administration
FAO	Food and Agricultural Organization
FEMA	Federal Emergency Management Administration
FERC	Federal Energy Regulatory Commission
FIPS	Federal Implementation Plans
FLPMA	Federal Land Policy and Land Management Act
FONSI	Finding of No Significant Impact
FPC	Federal Power Commission
GAO	General Accounting Office
IAEA	International Atomic Energy Commission
IGO	International Government Organization
IWC	International Whaling Commission
JCAE	Joint Committee on Atomic Energy
LCEP	Least Cost Energy Planning
LDC	Less Developed Countries
LEAF	Legal Environmental Assistance Foundation
LNG	Liquid Natural Gas
LULU	Locally Unwanted Land Use
LWR	Light Water Reactor
MOIP	Mandatory Oil Import Program
MU	Multiple Use
NAAQS	National Ambient Air Quality Standards
NARUC	National Association of Regulatory Utility Commissioners
NASA	National Aeronautics and Space Administration
NEP	National Energy Plan
NEPA	National Environmental Policy Act
NO <sub>x</sub>	Nitrogen Oxides
NPDES	National Pollution Discharge Elimination System
NRC	Nuclear Regulatory Commission
NRDC	Natural Resources Defense Council
NSPS	New Source Performance Standards
OPEC	Organization of Petroleum Exporting Countries
OSHA	Occupational Safety and Health Administration
ppm	parts per million
PURPA	Public Utilities Regulatory Policies Act
PV	Photovoltaic

R&D	Research and Development
RARE	Roadless Area Review and Evaluation
RCRA	Resource Conservation and Recovery Act
REA	Rural Electrification Act
SARA	Superfund Acceleration and Recovery Act of 1996
SDWA	Safe Drinking Water Act
SIP	State Implementation Plan
SO <sub>2</sub>	Sulfur Dioxide
SO <sub>3</sub>	Sulfur Trioxide
TCE	Trichloroethylene
TMI	Three Mile Island
TVA	Tennessee Valley Authority
UNEP	United Nations Environmental Program
USDA	United States Department of Agriculture
WMO	World Meteorological Organization

# THE ENVIRONMENTAL POLICY PARADOX



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