

Cambridge University Press
978-1-107-02395-6 - Environmental Health Ethics
David B. Resnik
Frontmatter
[More information](#)

ENVIRONMENTAL HEALTH ETHICS

Environmental Health Ethics illuminates the conflicts between protecting the environment and promoting human health. In this study, David B. Resnik develops a method for making ethical decisions on environmental health issues. He applies this method to various issues, including pesticide use, antibiotic resistance, nutrition policy, vegetarianism, urban development, occupational safety, disaster preparedness, and global climate change. Resnik provides readers with the scientific and technical background necessary to understand these issues. He explains that environmental health controversies cannot simply be reduced to humanity versus environment, and he explores the ways in which human values and concerns – health, economic development, rights, and justice – interact with environmental protection.

David B. Resnik, JD, PhD, is Bioethicist at the National Institute of Environmental Health Sciences, National Institutes of Health. Dr. Resnik additionally holds the positions of Adjunct Professor of Philosophy at North Carolina State University and Associate Editor of *Accountability in Research*. He has written eight books and numerous articles on ethical, philosophical, and legal issues in science, medicine, and technology. He is also Chair of the NIEHS Institutional Review Board, which oversees and reviews research projects that include human participants.

Cambridge University Press
978-1-107-02395-6 - Environmental Health Ethics
David B. Resnik
Frontmatter
[More information](#)

Cambridge University Press
978-1-107-02395-6 - Environmental Health Ethics
David B. Resnik
Frontmatter
[More information](#)

ENVIRONMENTAL HEALTH ETHICS

—
DAVID B. RESNIK
National Institute of Environmental Health Sciences



CAMBRIDGE
UNIVERSITY PRESS

Cambridge University Press
 978-1-107-02395-6 - Environmental Health Ethics
 David B. Resnik
 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/9781107617896

© Cambridge University Press 2012 except in the United States of America

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 2012

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

Resnik, David B.

Environmental health ethics / David B. Resnik.

p. ; cm.

Includes bibliographical references and index.

ISBN 978-1-107-02395-6 (hardback) – ISBN 978-1-107-61789-6 (pbk.)

I. Title.

[DNLM: 1. Environmental Health – ethics. 2. Environmental Medicine – ethics.

3. Environmental Policy. 4. Environmental Pollution – ethics, wa 30.5]

613'.1-dc23 2011052380

ISBN 978-1-107-02395-6 Hardback

ISBN 978-1-107-61789-6 Paperback

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

Cambridge University Press
978-1-107-02395-6 - Environmental Health Ethics
David B. Resnik
Frontmatter
[More information](#)

This book is dedicated to Rachel Carson.

Cambridge University Press
978-1-107-02395-6 - Environmental Health Ethics
David B. Resnik
Frontmatter
[More information](#)

CONTENTS

<i>Figures and Tables</i>	<i>page</i> viii
<i>Acknowledgments</i>	ix
<i>Abbreviations</i>	xi
1 Introduction	i
2 An Overview of Environmental Health	9
3 Ethical Theory	38
4 Toward an Environmental Health Ethics	56
5 Pest Control	80
6 Genetic Engineering, Food, and Nutrition	103
7 Pollution and Waste	133
8 The Built Environment	158
9 Climate Change, Energy, and Population	171
10 Justice and Environmental Health	202
11 Environmental Health Research Involving Human Participants	222
12 Conclusion	242
<i>References</i>	249
<i>Index</i>	293

FIGURES AND TABLES

FIGURES

1.1 Rachel Carson	<i>page 3</i>
5.1 <i>Anopheles freeborni</i> Mosquito Taking a Blood Meal	91
6.1 From Genes to Proteins	105
6.2 Global GM Crop Plantings, 1996–2005	111
7.1 U.S. Ozone Air Quality, 1980–2009	137
7.2 U.S. NO ₂ Air Quality, 1980–2009	137
8.1 Cumulative Deforestation of the Amazon Jungle, 1988–2010	159
9.1 Global Surface Temperatures since 1880	173
9.2 Atmospheric Carbon Dioxide Concentrations since 400,000 BCE	173
9.3 World Energy Consumption, 2008	182
9.4 World Population, 1950–2050	194

TABLES

2.1 Environmental Health Disciplines	10
3.1 Action-Guiding Characteristics of Different Ethical Theories	53
4.1 A Principle-Based Method for Ethical Decision Making	66
4.2 Principles of Environmental Health Ethics	77
9.1 Top Ten Most Populous Countries in 2010 and 2050	194
9.2 Demographic Age Groups for the World Population in 2010 and 2050	195
10.1 U.S. Cancer Incidence and Death Rates	203
10.2 HIV/AIDS Prevalence among Adults in 2009	204
11.1 U.S. Human Research Participant Protection Timeline	225

Cambridge University Press
978-1-107-02395-6 - Environmental Health Ethics
David B. Resnik
Frontmatter
[More information](#)

ACKNOWLEDGMENTS

I would like to thank for following individuals for helpful comments and critiques: Bruce Androphy, Lisa DeRoo, Michael Fessler, Andrew Jameton, Paul Jung, Freya Kamel, Matt Longnecker, Zubin Master, Liam O'Fallon, Walter Rogan, Bill Schrader, William Suk, and Dan Vallero. This book is the work product of an employee or group of employees of the National Institute of Environmental Health Sciences (NIEHS), National Institutes of Health (NIH); however, the statements, opinions, and conclusions contained herein do not necessarily represent the statements, opinions, or conclusions of NIEHS, NIH, or the U.S. government.

Cambridge University Press
978-1-107-02395-6 - Environmental Health Ethics
David B. Resnik
Frontmatter
[More information](#)

ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ANWR	Alaska National Wildlife Refuge
ASU	Arizona State University
BPA	Bisphenol A
CAA	Clean Air Act
CBPR	Community-based participatory research
CDC	Centers for Disease Control and Prevention
CFC	Chlorofluorocarbon
CLIA	Clinical Laboratory Improvement Amendments
CPR	Cardiopulmonary resuscitation
DDT	Dichlorodiphenyltrichloroethane
DEET	N,N-diethyl-3-methylbenzamide
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FDA	Food and Drug Administration
FEMA	Federal Emergency Management Administration
FFDCA	Federal Food, Drug, and Cosmetic Act
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FQPA	Food Quality Protection Act
FWS	Fish and Wildlife Service
GM	Genetically modified
GMO	Genetically modified organism
HDL	High density lipoprotein
HIV	Human immunodeficiency virus
IOM	Institute of Medicine
IPCC	Intergovernmental Panel on Climate Change
IPM	Integrated pest management
IRB	Institutional Review Board
KGOE	Kilograms of oil equivalent
KKI	Kennedy Krieger Institute

ABBREVIATIONS

LD	Lethal dose
LD ₅₀	Lethal dose 50 percent
LDL	Low density lipoprotein
LSD	Lysergic acid diethylamide
MRSA	Methicillin-resistant <i>Staphylococcus aureus</i>
MTD	Maximum tolerable dose
NAS	National Academy of Sciences
NHLBI	National Heart, Lung, and Blood Institute
NIEHS	National Institute of Environmental Health Sciences
NIH	National Institutes of Health
NIMBY	“Not in my backyard”
NIOSH	National Institute for Occupational Safety and Health
NOAA	National Oceanic and Atmospheric Administration
NOAEL	No observed adverse effect level
NRC	National Research Council
NTP	National Toxicology Program
OSHA	Occupational Health and Safety Administration
PCB	Polychlorinated biphenyl
PD	Parkinson’s disease
PM	Particulate matter
POP	Persistent organic pollutant
PP	Precautionary principle
PTSD	Post-traumatic stress disorder
RCT	Randomized controlled trial
RfD	Reference dose
SDWA	Safe Drinking Water Act
TB	Tuberculosis
TSCA	Toxic Substances Control Act
UN	United Nations
UNICEF	United Nations Children’s Fund
USDA	United States Department of Agriculture
VOCs	Volatile organic compounds
WHO	World Health Organization