Contents

Tables, Figures, Text Boxes, and Tox Boxes ix
The Editor xix
The Contributors xxi
Acknowledgments xxix
Potential Conflicts of Interest in *Environmental Health: From Global to Local* xxxi

PART 1 METHODS AND PARADIGMS 1
Chapter 1 Introduction to Environmental Health
Howard Frumkin 3
Chapter 2 Ecology and Ecosystems as Foundational for Health
Margot W. Parkes and Pierre Horwitz 27
Chapter 3 Sustainability and Health
Cindy L. Parker, Jessica D. Rhodes, and Brian S. Schwartz 59
Chapter 4 Environmental and Occupational Epidemiology
Kyle Steenland and Christine L. Moe 83
Chapter 5 Geospatial Data for Environmental Health
Lance A. Waller 111
Chapter 6 Toxicology
Gary W. Miller 123
Chapter 7 Genes, Genomics, and Environmental Health
David L. Eaton and Christopher M. Schaupp 153
Chapter 8 Exposure Science, Industrial Hygiene, and Exposure Assessment
Michael G. Yost and P. Barry Ryan 181
Chapter 9 Environmental Psychology
Nancy M. Wells, Gary W. Evans, and Kristin Aldred Cheek 203
Chapter 10 Environmental Health Ethics
Andrew Jameton 231
Chapter 11 Environmental Justice and Vulnerable Populations
Rachel Morello-Frosch and Manuel Pastor 251

PART 2 ENVIRONMENTAL HEALTH ON THE GLOBAL SCALE 273
Chapter 12 Climate Change and Human Health
Jonathan A. Patz and Howard Frumkin 275
### PART 3 ENVIRONMENTAL HEALTH ON THE REGIONAL SCALE

**Chapter 13** Air Pollution  
 *Michelle L. Bell and Jonathan Samet*  
 p. 319

**Chapter 14** Energy and Human Health  
 *Howard Frumkin*  
 p. 345

**Chapter 15** Healthy Communities  
 *Andrew L. Dannenberg and Anthony G. Capon*  
 p. 377

**Chapter 16** Water and Health  
 *Timothy Ford*  
 p. 413

### PART 4 ENVIRONMENTAL HEALTH ON THE LOCAL SCALE

**Chapter 17** Solid and Hazardous Waste  
 *Sven E. Rodenbeck and Henry Falk*  
 p. 453

**Chapter 18** Pest Control and Pesticides  
 *Mark Gregory Robson, George C. Hamilton, Wattasit Siriwong, and Héctor Luis Maldonado Pérez*  
 p. 477

**Chapter 19** Food Systems, the Environment, and Public Health  
 *Pamela Rhubart Berg, Leo Horrigan, and Roni Neff*  
 p. 503

**Chapter 20** Buildings and Health  
 *Howard Frumkin*  
 p. 539

**Chapter 21** Work, Health, and Well-Being  
 *David Michaels and Gregory R. Wagner*  
 p. 581

**Chapter 22** Radiation  
 *Matthew P. Moeller*  
 p. 603

**Chapter 23** Injuries  
 *Jeremy J. Hess, Anna Q. Yaffee, Jason R. Holmes, and Junaid A. Razzak*  
 p. 635

**Chapter 24** Environmental Disasters  
 *Mark E. Keim*  
 p. 667

**Chapter 25** Nature Contact  
 *Howard Frumkin*  
 p. 693

### PART 5 THE PRACTICE OF ENVIRONMENTAL HEALTH

**Chapter 26** Environmental Public Health: From Theory to Practice  
 *Lynn R. Goldman*  
 p. 725

**Chapter 27** Risk Assessment in Environmental Health  
 *Mary C. Sheehan, Juleen Lam, and Thomas A. Burke*  
 p. 747

**Chapter 28** Communicating Environmental Health  
 *Edward Maibach and Vincent T. Covello*  
 p. 769

Index  
 p. 791
Dedication

I dedicate this book to my wife, Joanne, and to my children, Gabe and Amara.

Joanne—lover of truth, of science, and of narrative, who walks the talk, who is incapable of pretense or malice, and whose love is an incalculable gift.

Gabe and Amara—dedicated environmentalists, great lovers of the outdoors, hard-headed idealists, change agents, and two of the most wonderful people I know. They will make giant contributions to a safer, healthier, more sustainable, and more just world.