

Water and Sanitation Related Diseases and the Environment: Challenges, Interventions, and Preventive Measures, a book published by Wiley-Blackwell in collaboration with Horizon International, is accompanied by these four hours of multimedia DVDs on two discs.

"The book is certainly an excellent resource for anyone interested in health in developing countries...."

Professor Wafaie Fawzi, Chair, Department of Global Health and Population, Harvard School of Public Health, 28 September 2012

Designed for use as teaching tools in classrooms and communities, by organizations, researchers and policy makers, they contain:

16 videos and 4 short-clip videos. For example, videos on water treatment and safe storage, successful household-centered sanitation systems, measures to prevent water pollution, dengue, cholera, schistosomiasis and trachoma, and the successful effort leading to the eradication Guinea worm disease.

525 illustrations, tables, and maps from the text.

Chapter abstracts written for the DVDs.

Additional text content and images not found in the book.



The book was written by 59 experts from the fields of public health, medicine, epidemiology, environmental health, climate change, environmental engineering, and population research. This publication presents the conditions responsible for water and sanitation related diseases, the pathogens and their biology, the morbidity and mortality resulting from lack of safe water and sanitation, the distribution of these diseases, and the conditions that must be met to reduce or eradicate them.

Examples of solutions are presented with an emphasis on what is achievable, considering that 2.6 billion individuals have no toilets and 1.2 billion people are exposed to water-related illness from their drinking water.

"This is a truly interdisciplinary book and reflects really well the need to work across scientific boundaries, and I think shows what can be achieved through collaboration."

*Society for General Microbiology,
May 15th, 2012.*

Updates and additional resources are on
a companion Web site:

www.wiley.com/go/selendy/water

and on the Horizon International Solutions Site:

www.solutionssite.org



Wiley offers special prices for bulk sales and greatly reduced prices for purchases of the book in developing countries (as low as 80 percent discount). Contact Wiley's Web page "Request Pricing for Special Sales" at <http://wiley.com>.

The books are also available as e-Books. ISBN: 978-0-470-52785-6. You can read excerpts at <http://www.wiley.com/WileyCDA/WileyTitle/productCd-0470527854.html>.

The Carter Center has PDFs of four chapters, thanks to special permission, on its Web site at <http://www.cartercenter.org/news/publications/health/experts.html>.



CONTENTS

PREFACE
CONTRIBUTORS
INTRODUCTION

Janine M. H. Selendy and Jens Aagaard-Hansen



SECTION I DEFINING THE PROBLEM

- 1 Tackling the Water Crisis: A Continuing Need to Address Spatial and Social Equity
Jay Graham
- 2 Sanitation and Hygiene: Taking Stock After Three Decades
Jay Graham
- 3 Water and Health: The Demographic Background
Robert Wyman
- 4 Water and War: Averting Armed Conflict and Protecting Human Rights
Barry S. Levy and Victor W. Sidel



SECTION II WATER AND SANITATION-RELATED DISEASES

- 5 Infectious Diarrhea
Sean Fitzwater, Aruna Chandran, Margaret Kosek, and Mathuram Santosham
- 6 Malnutrition and Undernutrition
Jeffrey K. Griffiths
- 7 Soil-Transmitted Helminths: Ascaris, Trichuris, and Hookworm Infections
Brian G. Blackburn and Michele Barry
- 8 Toxic Cyanobacteria
Ian Stewart, Wayne W. Carmichael, and Lorraine C. Backer
- 9 Dengue: A Water-Borne Disease
Scott B. Halstead
- 10 Dracunculiasis (Guinea Worm Disease): Case Study of the Effort to Eradicate Guinea Worm
Donald R. Hopkins and Ernesto Ruiz-Tiben
- 11 Onchocerciasis
Adrian Hopkins and Boakye A. Boatin
- 12 Reassessing Multiple-Intervention Malaria Control Programs of the Past: Lessons for the Design of Contemporary Interventions
Burton H. Singer and Marcia C. Castro
- 13 Schistosomiasis
Pascal Magnussen, Birgitte Jyding Vennervald, and Jens Aagaard-Hansen
- 14 Trachoma
Joseph A. Cook and Silvio P. Mariotti
- 15 Shigellosis
Michael L. Bennish and M. John Albert
- 16 The Zimbabwe Cholera Epidemic of 2008–2009
Edward Dodge
- 17 Infectious Disease Control in Ghana: Government's Interventions and Challenges to Malaria Eradication
Julius N. Fobil, Juergen May, and Alexander Kraemer



SECTION III WATER RESOURCES

- 18 Household Water Treatment and Safe Storage in Low-Income Countries
Thomas F. Clasen
- 19 Informal Small-Scale Water Services in Developing Countries: The Business of Water for Those without Formal Municipal Connections
Laura Sima and Menachem Elimelech

SECTION IV SANITATION AND HYGIENE

- 20 The Sanitation Challenge in India
Bindeshwar Pathak
- 21 Successful Sanitation Projects in Thailand, Malaysia, and Singapore
Jay Graham
- 22 Household-Centered Environmental Sanitation Systems
Bindeshwar Pathak

SECTION V ENVIRONMENTAL FACTORS OF WATER POLLUTION

- 23 Naturally Occurring Water Pollutants
Lorraine C. Backer, Jonathan K. Kish, Helena M. Solo-Gabriele, and Lora E. Fleming
- 24 Anthropogenic Sources of Water Pollution: Parts 1 and 2
Kerry L. Shannon, Robert S. Lawrence, and M. Danielle McDonald
- 25 The Hudson River: A Case Study of PCB Contamination
David O. Carpenter and Gretchen Welfinger-Smith
- 26 Other Water Pollutants: Antibiotic-Resistant Bacteria
Amy R. Sapkota

SECTION VI CURRENT AND FUTURE TRENDS IN PREVENTING WATER POLLUTION

- 27 Controlling Water Pollutants
Jeffery A. Foran
- 28 Global Substitution of Mercury-Based Medical Devices in the Health Sector
Joshua Karliner and Peter Orris
- 29 Addressing Sources of PCBs and Other Chemical Pollutants in Water
Gretchen Welfinger-Smith and David O. Carpenter
- 30 Additional Measures to Prevent, Ameliorate, and Reduce Water Pollution and Related Water Diseases: Global Water Governance
Nikhil Chandavarkar

SECTION VII EMERGING ISSUES IN ECOLOGY, ENVIRONMENT, AND DISEASE

- 31 Changing Geographic Distribution of Disease Vectors
Mary E. Wilson
- 32 Malaria in the Brazilian Amazon
Marcia C. Castro and Burton H. Singer
- 33 Ecosystem Services, Water Resource Development, and Human Infectious Disease
Uriel N. Safriel
- 34 Ocean Pollution: Health and Environmental Impacts of Brominated Flame Retardants
Susan D. Shaw and Kurunthachalam Kannan

SECTION VIII CONCLUSION

- 35 Assessment of Progress in Meeting the UN Millennium Development Goals
Gretchen Loeffler Peltier, Unni Krishnan Karunakara, and Anson Elisabeth Wright
- 36 Extending the Right to Health Care and Improving Child Survival in Mexico
Julio Frenk and Octavio Gómez-Dantés
- 37 Using Kinship Structures in Health Programming—An Example of Preventive Measures and Successful Interventions
Moses N. Katabarwa

