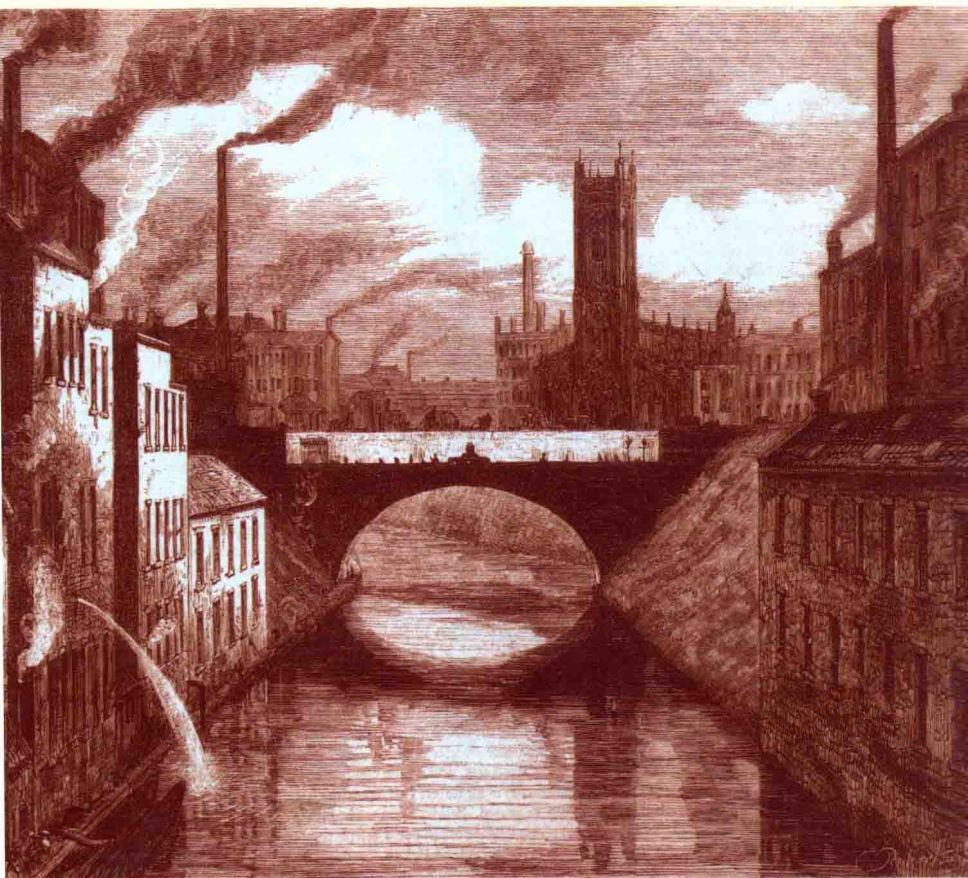
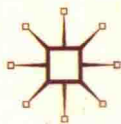


# ENVIRONMENT, HEALTH AND HISTORY



**EDITED BY VIRGINIA BERRIDGE  
AND MARTIN GORSKY**



# Environment, Health and History

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# Environment, Health and History

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# Foreword

*Prof. Sir Andy Haines*

*London School of Hygiene and Tropical Medicine*

This book, which resulted from papers given at a landmark conference held at the London School of Hygiene and Tropical Medicine, provides a wide-ranging and authoritative overview of the evolution of our understanding of the interlinkages between environment and human health. While the relationship between the environment in which people live and their health has been known since the dawn of medicine it has often been consigned to the sidelines, particularly in relation to the contemporary emphasis on bio-medicine which focuses on individual relationships between health professionals and patients. Although this approach has resulted in substantial advances in the treatment and prevention of diseases, environmental factors currently play a major role in determining health, particularly in low-income countries. According to World Health Organisation estimates approximately one quarter of the global disease burden, and more than one third of the burden among children, is due to modifiable environmental factors.

Much of the earlier knowledge about environmental exposure and ill health arose from very high occupational exposures of workers in different industries to a range of chemical agents, and the subsequent development and application of epidemiological techniques to assess their impacts on health. With increasing regulation in the developed countries much of the industrial production which has the potential to result in such exposures has been moved to middle, and increasingly low-income countries with low health and safety standards. Likewise, partly because of the relative success of clean air legislation in developed countries, poor nations currently bear the brunt of indoor and outdoor air pollution, which are responsible for around 1.6 million and 800,000 annual deaths respectively. Increasingly therefore concerns about inequities in health and the influence of social determinants in maintaining such inequities are converging with the environmental health agenda.

There are also 'unfinished agendas' remaining from past ideological conflicts, such as the large numbers of nuclear weapons remaining from the Cold War. The failure to abolish nuclear weapons is fuelling nuclear proliferation as more nations perceive the political advantages to be



gained from possessing weapons of mass destruction. The detonation of even a small proportion of existing nuclear weapons could create global environmental havoc, threatening crop production around the world as a result of the transport of large amounts of dust into the atmosphere which in turn would block sunlight from the Earth's surface and raises the potential spectre of mass starvation.

Although from our contemporary vantage point it may seem obvious that the existence and continued survival of humanity is dependent on the integrity of the planet's 'life-support' systems, including ecosystems that underpin food production and biodiversity and the availability of fresh water in the face of growing demands, this perspective has only recently begun to make its mark on academic discourse and public policy. Just as public health researchers and research funders have paid too little attention to the environmental determinants of health, environmental researchers, activists and policy makers have, all too often, been seemingly unaware of or indifferent to the interwoven relationships which bind together human health and environmental integrity. Increasingly it has become imperative to address these epistemological discontinuities to create genuinely transdisciplinary collaborative working which will illuminate our understanding of these complex relations and strengthen the evidence base for policies to provide the conditions for healthy living for a world population of 9 billion or more by the mid-century. Failure to do so, against a background of multiple challenges for humanity, including climate change, ocean acidification, depletion of fresh water resources, deforestation (especially of tropical forests), dramatic loss of species and burgeoning population growth (particularly in sub-Saharan Africa), will result in much of humanity being excluded from the health dividends arising from the dramatic social progress of recent decades. At the same time these challenges also pose wider questions for 'developed' societies whose trajectories of economic growth have been based on the unsustainable exploitation of affordable fossil fuels and other resources. This path of development will be increasingly denied to many 'developing' countries at a time when they are also suffering disproportionately from the impacts of global environmental change to which they have contributed little.

This book provides a range of invaluable perspectives on how the knowledge of the environmental influences on human health has developed over time. It illuminates the strengths and weaknesses of previous attempts to advance knowledge and the successes and failures of policies arising from environment and health research. It will prove a seminal guide to all those with an interest in this growing field of research.

# Acknowledgements

This book began life as the 2007 conference of the European Association for the History of Medicine and Health held at the London School of Hygiene and Tropical Medicine. We are grateful to the Scientific Board of the Association for their support. We are also grateful for financial support from the Wellcome Trust, the London School of Hygiene and Tropical Medicine, and the Society for the Social History of Medicine. Colleagues at the School helped with organisation: Rachel Herring, Ingrid James, Alex Mold and Suzanne Taylor. In the production of this book, our thanks are due to Ingrid James for editorial support, to the anonymous referees who reviewed our proposal, and to Ruth Ireland and Michael Strang for support from Palgrave Macmillan. We are grateful to Diana LeCore for compiling the index.

We are grateful to Dr K. S. Hocking for permission to reproduce the photograph in Chapter 7. Images in Chapter 8 are published courtesy of the University of Strasbourg and of the National Library of Medicine, Bethesda, US. The photo of the El Paso smelter in Chapter 9 is courtesy of El Paso Public Library. This chapter is a shortened version of a paper in *Medical History* in 2010.

# Notes on Contributors

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# List of Abbreviations

AEC	Atomic Energy Commission
AHRC	Arts and Humanities Research Council
BEIR	Biological Effects of Ionising Radiation
BHC	Benzene Hydrochloride
BHRA	British Health Resorts Association
BMA	British Medical Association
BSF	British Spa Federation
CEDR	Comprehensive Epidemiologic Data Resource
CFC	Chlorofluorocarbon
CH <sub>4</sub>	Methane
CDW	Colonial Development and Welfare
CIC	Colonial Insecticides Committee
CO <sub>2</sub>	Carbon Dioxide
CTB	Comprehensive Test Ban
DDT	Dichlorodiphenyltrichloroethane
DOE	Department of Energy
DSIR	Department of Scientific and Industrial Research
EMB	Empire Marketing Board
EPA	Environmental Protection Agency
FAO	Food and Agriculture Organisation
GHG	Greenhouse gas
HHS	Health and Human Services
HVAC	Heating, ventilation and air-conditioning
IEER	Institute for Energy and Environmental Research
IPCC	Intergovernmental Panel on Climate Change
ICRP	International Commission on Radiological Protection
ICSU	International Council for Science (formerly International Council of Scientific Unions)

ILO	International Labour Organisation
INC	International Negotiation Committee
IPPNW	International Physicians for the Prevention of Nuclear War
ISMH	International Society of Medical Hydrology
ITC	International Tuberculosis Campaign
LSHTM	London School of Hygiene and Tropical Medicine
MAC	Maximum allowable concentration
MH	Ministry of Health
NEJM	<i>New England Journal of Medicine</i>
NHI	National Health Insurance
NHS	National Health Service
NRC	Nuclear Regulatory Commission
ppm	Parts per million
PSR	Physicians for Social Responsibility
SCOPE	Scientific Committee on Problems in the Environment
SPEERA	Secretarial Panel for the Evaluation of Epidemiological Research Activities
UFA	Universal Film Aktiengesellschaft
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
USIS	United States Information Service
USPHS	United States Public Health Service
WHO	World Health Organization
WMO	World Meteorological Organization

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