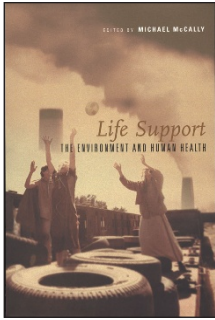


## The unhealthy Earth



### Life Support: The Environment and Human Health

edited by Michael McCally

MIT Press, \$19.95

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Reviewed by Joseph Grzymski

Man-made environmental disturbances—as wide-ranging as air and water pollution, ecosystem disruption, industrial chemicals and war—have all had an impact on human health. We are reshaping the Earth and its inhabitants at an unprecedented rate regardless of the potential consequences. This book is about the relationship between human and ecosystem health in a jittery political and social climate, when conflict and war are easier to justify, it seems, than anything resembling a sound, environmental policy.

Only now are we beginning to see something like a global effort to help treat and stop the spread of AIDS. Unfortunately, after reading this book, one realizes that AIDS is only a small problem developing nations will face in the coming years. The world population will soon reach 10 billion, with 20% of the world consuming two-thirds of its resources and generating 75% of the waste.

The urgency of addressing global problems is masked by statistical probabilities, ignorance, greed, economics and politics. The questions scientists ask, and the answers they discover, are often nonlinear and do not translate well into public policy. This book does much to focus attention on some immediate threats to ecosystem and human health. The book is organized into problems that face the general population, urban populations, poor and underdeveloped nations and vulnerable populations such as children and industrial workers.

This book is an excellent reference for specific facts and definitions that relate to the topics covered in each chapter. The chapter on water, for example, has stunning statistics on water access and usage and gives a general overview of topics such as biological and chemical threats to water quality, sources of contamination and decontamination techniques. It links the issues to accompanying health problems such as diarrhea and dehydration caused by bacterial, viral and protozoan pathogens.

In the discussion on air pollution, the authors are careful to point out causal association between an environmental variable (in this case particulate air pollution) and mortality. These data apply not only to developing nations—where particulate levels are in some

cases 100 times higher than in the United States—but to London, New York City and Stuebenville, Ohio, where daily increases in particulate air pollution increase mortality rates on the following day. The book is at its best when it provides succinct, specific accounts of specific environmental and health problems. Not surprisingly, these are the data that are hardest to accumulate.

During their research, the authors culled several incomplete or improperly designed studies and found many gaps in the data. For example, information collected on the potential impact on adult health is applied to children, and studies of acute exposure are used to diagnose potential effects of chronic exposure. These are familiar problems, given the finite resources in the field. Unfortunately, public policy and attitudes focus on what scientists cannot say, rather than on the startling decline in world ecosystem health. A major weakness of the book is that it too delicately balances the data with what is still unknown. It is a shame that the collective tenor of the book is not more forceful. After all, these scientists understand the implications better than anyone.

Most of the chapters in this multiauthor book conclude with prescriptions, solutions or recommendations. The conclusions are intuitive—based on the present failure of policy—rather than innovative and actionable. The authors clearly point out for example, that only a few family planning and reproductive health services worldwide are successful. Modeling new successes on prior achievements and introducing new economic systems that help protect the environment may be worthwhile, but the book fails to convince the reader why health, economics and the environment are related.

The authors invoke the precautionary principle, which is an imperative that our uncertainties as scientists not be used as an excuse to ignore faulty policy or to not act on a potential problem. But even as the authors present great data that would dismiss any other uncertainty about the severity of the global health crisis, they do not contribute anything new to a prescription that must mix health, politics and economics.

Having read *Life Support*, I am now critical of my own, similar, conclusion, which acknowledges the severity of this crisis but does not add anything original to a one-sided debate. Acting on emerging threats requires nothing short of a sea change from our cure-all ways. Our knowledge of human health issues, the environment and emerging crises must be used to prevent a potential catastrophe. But who—or what—will emerge to mandate this change?

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