

Life Support: The Environment and Human Health

Michael McCally (Ed.)

Cambridge, MA: MIT Press, 2002. 326 pages.

Reviewed by **Melinda Moore**

Life Support: The Environment and Human Health provides a comprehensive review of a vitally important—yet still imperfectly addressed—global priority: the connections between health and the environment. The book is an update to the 1991 publication *Critical Condition: Human Health and the Environment*, which was developed in preparation for the 1992 United Nations Conference on the Environment and Development in Rio de Janeiro.

on Sustainable Development in Johannesburg. Addressed to “informed lay readers,” “trainees,” and “professionals,” this second book lists three objectives: “to update the original work, to expand the coverage, and to focus on solutions or prescriptions” (page viii-ix). In my view, despite inaccuracies and occasional political biases, Life Support largely accomplishes its objectives.

In the preface, editor Michael McCally provides relevant history leading to the current regulatory expertise can come from the publication and notes the role of the health and environmental sectors working together in addressing issues of the environment. The best of both for policy and programs.

and human health. One can only agree with his call for “health-trained professionals...to become central figures in environmental policy discussions” (page ix).

¹ Chapter 1 of Life Support, McCally’s “Environment, Health, and Risk,” provides a nice overview of the thematic nexus. The chapter makes several important points, including: (a) stressing the importance of a multidisciplinary (and by extension multisector) approach to addressing the range of environmental health issues; and (b) suggesting revisions to medical curricula to include explicit environmental health content. However, I have some alternative views to a few of the chapter’s points.

First, my own view of implementing the multidisciplinary/multisector approach is to work across institutions rather than including all relevant expertise within a given institution. Health expertise can come from the health sector, and environmental science from the environmental sector. Both already acknowledge their importance. The breadth of Jacobsen and Fier’s passion on these topics is impressive, and one hopes that their work in these fields continues well into the future they envision. Second, I believe McCally’s suggestion to shift from pollution control toward pollution prevention is not a matter of either/or, but

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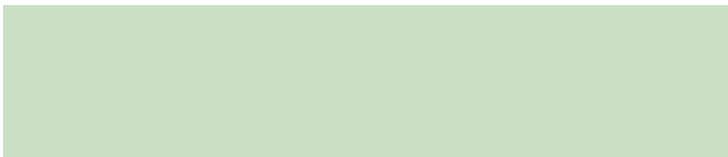
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On one hand, the U.S. Food and Drug Administration has determined (based on rigorous scientific review) that foods derived from bioengineered crops for which food safety reviews have been completed are as safe as their conventional counterparts. On the other hand, European regulators take a more “precautionary approach” in limiting use of bioengineered crops. But Schettler, Barrett, and Raffensperger tend to unnecessarily polarize the debate by

numerous sloppy editing inaccuracies throughout), and, as noted above, not entirely factually accurate.

Also surprising was the virtual absence of reference in the book to the landmark publication *The Global Burden of Disease* (Murray & Lopez, 1996), which would have placed environmental health issues within an overall context. The book addresses global environmental health issues, yet it is not particularly global in its perspectives—most of its authors are from the United States, with the rest from Canada, the United Kingdom, the Netherlands, and Australia, and none from developing countries. Finally, *Life Support*’s authorship is not representative of the broad range of legitimate stakeholders in the domain of global environmental health—which includes not only academia but also government policymakers, practitioners/ implementers, key multilateral organizations such as those of the United Nations system or international financing institutions, civil society, and the environmental sciences sector itself.

My conclusion is that *Life Support* sets the stage for a third publication in the series that would expand this book’s scope in a few

characterizing the “precautionary principle” as on the side of ethics and environmental preservation—thus implying that other approaches are unethical and environmentally unfriendly.

No one publication can address all needs and interests on a given topic, and *Life Support* has many key features and lacks many others. The book is comprehensive in terms of the range of health issues addressed. It is scholarly, with 25 of the 27 contributing authors identified as health professionals based in academic institutions. It is very easy and interesting to read, especially with the addition of the upbeat objective to discuss “solutions or prescriptions.” For example, the chapter by Joe Thornton, McCally, and Jeff Howard on “Body Burdens of Industrial Chemicals in the General Population” was particularly well written and informative. Its table listing approximately 200 specific chemical substances and the human tissues in which these are found is comprehensive and well referenced. (The absence of a “solutions/ prescriptions” section in this chapter was only a minor disappointment.)

However, the book is, surprisingly, not particularly current, an impression borne out in my tedious tallying of its approximately 1000 references—68 percent of which are dated earlier than 1998. *Life Support* is also not evenhanded across chapters (pitting science versus advocacy), not well edited (with

Notes

¹ However, at least one of the McCally's premises in the preface is factually inaccurate. While he asserts that, when the first book was written in 1991, "[n]o medical or public health organization worked on environmental issues" (page viii), the U.S. Department of Health and Human Services alone at that time had at least four agencies that had both organizational structures for environmental health and environmental health programming in place.

² See, for example, Semenza et al. (1998); Quick et al. (1999); Reller et al. (2001); Roberts et al. (2001); and Quick et al. (2002).

³ For example, Speidel writes on page 91 that "[I]f we are able to summon the political will to make good reproductive health care, including family planning and safe abortion, widely available, and if we can make reasonable progress in educating women and improving their status, population growth is likely to decline to manageable levels." The reference to abortion is not necessary to make his point and seems to gratuitously introduce a political point of view.

References

- Murray, Christopher J.L. & Alan D. Lopez. (1996). *The global burden of disease*. Cambridge, MA: Harvard University Press.
- Quick, R.E.; A. Kimura; A. Thevos; M. Tembo; I. Shamputa; L. Hutwagner; & E.D. Mintz. (2002). "Diarrhea prevention through household-level water disinfection and safe storage in Zambia." *American Journal of Tropical Medicine and Hygiene* 66(5), 584-589.
- Quick, R.E.; L.V. Venczel; E.D. Mintz; L. Soletto; J. Aparicio; M. Gironaz; L. Hutwagner; K. Greene; C. Bopp; K. Maloney; D. Chavez; M. Sobsey; & R.V. Tauxe. (1999). "Diarrhoea prevention in Bolivia through point-of-use water treatment and safe storage: A promising new strategy." *Epidemiology and Infection* 122, 83-90.
- Reller, M.; Y. Mong; R.M. Hoekstra; & R.E. Quick. (2001). "Cholera prevention with tradition and novel water treatment methods: An outbreak investigation in Fort-Dauphin, Madagascar." *American Journal of Public Health* 91(10), 1608-1610.
- Roberts, L.; Y. Chartier; O. Chartier; G. Malenga; M. Toole; & H. Rodka. (2001). "Keeping clean water clean in a Malawi refugee camp: A randomized intervention trial." *Bulletin of the World Health Organization* 79, 280-287.
- Semenza, J.C.; L. Roberts; A. Henderson; J. Bogan; & C.H. Rubin. (1998). "Water distribution system and diarrheal disease transmission: A case study in Uzbekistan." *American Journal of Tropical Medicine & Hygiene* 59(6), 941-6.

concludes with a convincing South Africa case study highlighting these linkages. The South African experience demonstrates the negative impact HIV/AIDS has had on a myriad of institutions, including education, health, and defense. The case study also provides evidence of economic decline due to the pandemic. Unfortunately, *The Global Threat* fails to provide an example of a success story such as Thailand—where evidence suggests that

coordination and collaboration remains a problem.

But regardless of its strengths, *The Global Threat* suffers most from a seeming identity crisis. Arguably, global health impacts U.S. health like never before due to the globalization of agriculture and the increased movement of peoples. This linkage certainly justifies a report that looks at both emerging infectious disease in the United States and around the world. What the report does not do well is to distill this connection into a succinct take-home message that clearly states how U.S. security and global security are related. *The Global Threat's* length and range of focus make it light on detail, creating a report that lays out many challenges but few solutions.

The report's recommendation section also disappoints in its failure to consider cross-cutting issues—a very important omission, given the complexity of the issues. For example, the authors attempt to make the argument that disease, environment, and security issues are linked, but they fail to mention environmental issues in their recommendations. Yet better cooperation and collaboration between the health and environment sectors—not just between government agencies, but with the broader civil society community as well—is crucial to the battle against infectious diseases.

Another of the report's recommendations

states that countries should promote urban sustainable development and urban regeneration; but the authors do not define these terms or the types of issues policymakers should address. As a result, *The Global Threat*

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loses an opportunity to reinforce the concept that health, environmental, and economic issues are inextricably linked to one another.

The report's conclusion is most successful when it points out the lack of public-health foresight and spending in the United States—a country with a true bounty of financial resources. The authors suggest that, while important, large-scale biological attacks and a tainted water supply are relatively unlikely, the U.S. public is much more likely to see a higher rate of return on money spent on monitoring and preventing the spread of infectious disease (such as SARS) than focusing on terrorist attacks using weapons of mass destruction.



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