
Environmental change, climate and health — issues and research methods

Edited by Pim Martens and Anthony J. McMichael,
Published by Cambridge University Press,
Cambridge, England
ISBN 0-521-78236-8 price UK £65

If you are looking for a cookery book of research projects on global climate change, this is not the one for you. Rather, it is a book about humility and the limited tools currently available for research on the health impacts of these planet-wide changes. Writing mainly for health professionals and graduate students, distinguished scientists discuss the current situation, along with problems and hurdles related to their own disciplines and interdisciplinary work, in a dozen chapters.

The authors provide useful contextual and historical information, as well as detailed discussions on burden of disease, mathematical modelling, epidemiology, and the use of analogue approaches to study climate variability and health. Making appropriate use of practical examples, they review issues of food, waterborne and vectorborne diseases, integrated assessment modelling and the use of other tools such as remote sensing and geographical information systems. They do this very well, in an informative and interesting way.

As one may expect, however, there are some overlaps in the text, as several

authors use the same historical examples. Some readers may wish that the authors of the chapter on mathematical modelling had read the recommendations for enriching and adding to the communication techniques used in integrated assessment modelling before plunging into their arguments with equations and mathematical parlance. But these are minor shortcomings in a book which brings together, for the first time, research methods that can be applied to these new and complex issues.

Despite these many strengths, the reader is left feeling hungry for a resolution of the internal conflict evident in the book. Many authors argue that we lack adequate data and that even if we had them, it would be difficult to pinpoint the contribution of these gradual changes in mean climate to a particular health outcome. Likewise the role of any given causal factor in a web of environmental exposures is ill-defined — not to mention the fact that we often don't even know the relevant baseline rates. The same applies to integrated models that usually focus on one or two elements such as the macroeconomy or physical systems, at the expense of social dynamics or health systems. Furthermore, the authors predict that human values, preferences and choices, in short the key decision-making processes, will probably never be captured by formal models.

So what is all this about in the end? Should we continue trying to improve our tools and methods even though we know they probably won't help us adapt to the coming changes? Monitoring and surveillance are proposed as one important task for public health authorities, and WHO has argued for this repeatedly for the last decade. Also, reducing vulnerabilities is briefly mentioned in one of the last chapters, with the conclusion that we need to take a more humble stance towards our world and its complexities. We have every reason to believe and expect that our ability to control climate evolution will remain very small, even if the Kyoto agreements were all adhered to.

The traditional response of successful societies to danger has been to reduce their vulnerabilities and increase their resilience, as public health practitioners know. Decision-makers would probably welcome such options.

But although the authors demonstrate the need for decisions, they also demonstrate the lack of a basis on which to make them. The resolution of this conflict might come from putting more emphasis on adaptation strategies and bringing in social scientists, economists, policy and management people as well as other members of society that were not included in the genesis of this book. We probably need to know more about the place these changes occupy in the public mind, how non-specialists and decision-makers understand them, the behavioural changes that need to take place worldwide, the new standards needed for infrastructure, and so on. But these points are for another book. Let's hope it will be as useful and well done as this one. ■

Pierre Gosselin¹

¹ Head, WHO/PAHO Collaborating Center on Environmental and Occupational Health Impact Assessment and Surveillance, Centre hospitalier universitaire de Québec (CHUQ), 2400 rue d'Estimauville, Beauport, QC, Canada G1E 7G9 (email: Pierre-I.gosselin@crchul.ulaval.ca).