Environmental and social determinants of health

Editors:

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Douglas Webb
In the “Era of Sustainable Development,” health is an essential input and the most valuable human development outcome. Achieving the best health outcomes involves tackling the environmental and social determinants of health that are the subject of this book.

Health is often mentioned in the outcome documents of the Rio+20 Conference and the new Sustainable Development Goals (SDG) established by the Member States and detailed in the report of the UN Secretary-General: The Road to Dignity by 2030: Ending Poverty, Transforming All Lives and Protecting the Planet. The new set of 17 goals includes a stand-alone goal for health—SDG 3: Ensure healthy lives and promote well-being for all at all ages—and addresses the environmental and social determinants of health in the other 16.

This book covers most of the health-related SDG themes and, it is hoped, will assist the public health community in creating the intersectoral synergies necessary for implementing the sustainable development goals in the decades to come.

The new UN Sustainable Development Agenda recognizes that environmental degradation has its roots in profound social, economic, and technological inequities that can and should be remedied. This means that the entire local and global framework of public policies, initiatives, and programs to promote public health must be expeditiously, critically, and realistically harmonized and modernized to move toward sustainable development with greater justice and solidarity.

This publication offers an independent perspective and does not necessarily express the agreements and resolutions of the Governing Bodies of the Pan American Health Organization (PAHO). In its 31 chapters, more than 100 authors and co-authors from different countries of the Region of the Americas voice their opinions, analyze situations, and offer proposals for strengthening and advancing decision-making capacity, public policies, intervention programs, and the necessary lines of applied research.

This English edition of Environmental and Social Determinants of Health expands on and updates the content of the earlier editions published in Spanish in 2010 and Portuguese in 2011. Our hope is that it will foster a general understanding and further the debate about the importance of mitigating the health damage caused by the most pressing environmental and social determinants associated directly or indirectly with health issues.

This publication represents PAHO’s continued commitment to more coherent management of the health determinants, grounded in a series of ethical principles and policies geared to promoting the health and well-being of all, especially the most vulnerable population groups.

Dr. Carissa F. Etienne
Director, Pan American Health Organization
Assembling the evidence on environmental and social determinants of health

Early in Chapter 1 of this volume, by Akerman and colleagues, I find:

“What stage are we now entering, after the publication of the CSDH (Commission on Social Determinants of Health) report in August 2008? A continuation of the debate on the Commission's proposals, with the consequent implementation of its recommendations in public policies and academic research? Or has its influence on public policy and academic research agendas already begun to wane?”

How could I not read on? I chaired the Commission (CSDH), worked hard with my colleagues for 3.5 years, produced a report, and what happened then? Is any one listening? This whole volume, starting with Chapter 1, tells me that people are listening. Actually starting with the Editors’ Introduction when they use the phrase 'the causes of the causes.' This phrase, borrowed from Geoffrey Rose, became one of our signature tunes for social determinants of health. We need to address the proximate causes of health inequities but we need to address the structural causes of inequities in the distribution of those causes.

I describe myself as an evidence-based optimist. Here, from Akerman and colleagues in Chapter 1 is evidence for my sunny state. After describing Brazil's Commission on Social Determinants of Health, they continue:

“Chile and Argentina also have national commissions and Costa Rica's is in the pipeline. Additionally, a number of intersectoral committees have been established in the Region. No analysis has been made of the results of the national commissions, but one could be considered as a future initiative.

“Indeed, there is life after the publication of the Report of the WHO Commission on Social Determinants of Health! The issue remains on the agenda.”
If one needed further evidence of that assertion, here are Pellegrini and Buss in Chapter 2:

“The CSDH revived this tradition of thought and action (going back to Virchow), kicking off a global SDH-based movement to tackle inequities in health. Among the several lines of action developed by the CSDH, three stand out:

- Joint work with country partners, including Brazil, to foster and support national health promotion policies through intervention on the SDH;
- Creation of knowledge networks made up of eminent institutions and scholars to collect, analyze, and disseminate existing knowledge on relevant subjects related to the SDH;
- Social mobilization around the subject of SDH through joint work with civil society organizations at the global level.”

Many of the chapters that follow are testaments to these statements.

The editors make clear that they did not set out to produce a textbook or a concise statement of PAHO policy. That said, there is so much here of interest to anyone wanting to learn about environmental and social determinants of health: cities, ecosystems, climate change, air pollution, energy, natural disasters, consumer protection, human rights, work, social protection, violence, traffic deaths, early child development, and much more.

The ‘Environmental and Social’ of the title is key. There is a long tradition of environmental health. As chapter authors make clear the CSDH gave a major boost to social determinants of health. What is needed is to put the two together. This book provides many of the essential building blocks to do just that.

For example, the chapter on ecosystems by Rodrigo and Romero makes the case that the poor are especially susceptible to the effects of ecosystem disturbance:

- Their health is more precarious.
- They have less access to environmental services such as drinking water; and to material goods at the household level.
- They are less able to cope with disasters and other events.
- Their productivity and employment in activities that depend directly on the ecosystem is lower.

An abiding impression from this volume is the depth of expertise in the Region on all the topics covered. This positive impression can be beguiling. In their chapter on work Borja-Aburto and Sousa Santana review what is known from global research that can be applied to the Americas. They point out, however, that a small minority of the published literature actually comes from Latin America and the Caribbean. There is a great need to foster more research on these topics in the Region.

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The richness of the material here makes clear that there is still a good deal of intellectual heavy lifting to be done. The newly agreed sustainable development goals will, one hopes, provide the momentum for a wider array of monitoring throughout the region to measure inequities in environmental and social determinants and in health outcomes. The new PAHO-commissioned review of health equity in the Americas will have as its starting point the substantial body of work contained in this volume. The Review’s aim will be to learn from activities in the Region and elsewhere and to formulate concrete policy recommendations to achieve health equity. There can be no more urgent, and rewarding, task.

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We are pleased to present the new English edition of Environmental and Social Determinants of Health, which complements earlier editions published in Spanish in 2010 and Portuguese in 2011.

There are many reasons for publishing this book, the primary one being to reiterate the importance of environmental health—in its physical, biological, and social dimensions—as an increasingly relevant component of health agendas in the Region of the Americas. A growing body of evidence indicates that good or ill health is determined at both the individual and population levels by a diverse, interactive, and complex gradient of environmental and social factors.

Environmental health has been evolving very dynamically in recent decades. New and ever-more complex social and technological challenges on a global scale are growing, even as more basic unresolved environmental problems at the local level, with substantial cumulative effects on human health. Meanwhile, innovations in knowledge, methodologies, measurement and analytical tools, and above all, technology, offer tremendous problem-solving potential that is growing day by day; this indicates that with the necessary political will, many environmental threats can be substantially mitigated, thus promoting human well-being. To achieve more sustainable development, when reformulating their public policies and intervention programs, most of the countries of the Region are introducing some of these innovations to one extent or the other. Despite this progress, however, only limited results have been achieved, mainly because of the inability of societies to reach the political consensus needed to significantly alter the “causes of the causes” of the profound inequities that adversely impact the health and wellbeing of large population sectors. We hope that readers of this book will find useful information that may contribute to this debate.

This English edition coincides with the target year (2015) for achieving the Millennium Development Goals (MDGs) established at the start of the 21st century. Some of the chapters in the Spanish and Portuguese editions addressed issues relevant to the discussion and implementation of activities aimed at meeting several of the MDGs and also examined some of the neglected areas and gaps. We also hope that the new English edition will contribute to the achievement of the recently agreed by all nations: “Agenda 2030 for Sustainable development and its Sustainable development Goals (SDGs)”, which represents a unique opportunity to achieve important advancements on health, through changes in the Environmental and Social Determinants of health.

In every chapter of this book, the authors propose lines of research that could yield new evidence to fill in the gaps in our understanding of several areas of environmental health and the social aspects of health. The book provides continuity for a pioneering proposal to strengthen environmental health in Latin America and the Caribbean that was initially presented in 1993 by the Pan American Center for Human Ecology and Health (ECO/PAHO), together with the U.S. Environmental Protection Agency (EPA) and the U.N. International Program on Chemical
Safety (IPCS). The purpose of this proposal was to encourage the development and implementation of research projects designed to increase the scientific information needed for sustaining and evaluating policies and programs to reduce and mitigate some of the harmful health impacts of exposure to environmental contaminants.

The reader will find that in each chapter, the authors address issues that may be broached in other chapters of the book, but with different interpretations or approaches, which do not necessarily coincide with WHO and PAHO’s official documents or resolutions. As coordinators of the publishing process, after extensive discussions with the authors, we reached the conclusion that it was more valuable to preserve the plurality and diversity of opinions and interpretations—especially, differences of opinion on a given topic—rather than try to reconcile or homogenize their approaches and conclusions, in the hope that this would enrich the debate from different angles and perspectives.

We are proud that this book represents a broad spectrum of opinions and proposals, especially given the keen intellect and experience of each author. The authors have highly diverse profiles, professional backgrounds, and experience but at the same time complement one another. They constitute a stimulating mix of experts from the health sector and other sectors that deal with the environmental and social determinants of health. The views of academics are combined with input from the day-to-day activities of experienced government decision- and policy-makers. Several of the authors work in WHO collaborating centers. In short, this book offers a wide range of highly diverse contributions on critical issues in theory and practice associated with the environmental and social determinants of health.

This English edition has been enriched with six chapters on topics not included in the original Spanish edition of 2010. Its 31 chapters have been divided into three sections. The first covers major cross-cutting issues and the frame of reference for the environmental and social determinants of health, including the transition to sustainable development and environmental health governance in the Region of the Americas. The second covers developments in important technical areas in Latin America and the Caribbean, in particular the development of epidemiology and risk assessment; toxicology development; interactions between environment and the genome; the vulnerability of populations to environmental risks; social and environmental determinants of chronic diseases; the role of laboratories in environmental health; cities and health determinants; the degradation of ecosystems; the emergence and reemergence of diseases associated with environmental degradation; risk communication; the formulation of indicators; and consumer health protection. Finally, the third section includes chapters that offer more detailed analysis of specific environmental health issues related to energy use; water resources and basic sanitation; the importance of recreational waters; genetically modified crops and foods; the potential impact of nanotechnology and nanoparticles on health and the environment; sustainable agricultural systems; occupational risks; the buildup of industrial and hazardous waste; air, water, and soil pollution; and emerging issues such as violence, road safety, tobacco smoke, the environment as a facilitator of child development, and the impact of technological environmental emergencies and natural disasters.

Although the book covers a wide range of topics, it is by no means encyclopedic. We are aware, moreover, that knowledge and evidence are increasing at an even more rapid pace and that some topics may not have been analyzed or updated in great detail. Nonetheless, we hope that its content will be of interest to policy- and decision-makers in the various sectors, programs working to address the environmental and social determinants of health, and those who study these issues.

We are especially grateful for the support and dedication of all the authors and coauthors, who wrote their respective chapters with great commitment and vision.

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Environmental and social determinants of health