



# Robert W. Kates' Reader: A New Map of Sustainability Science and Technology

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Sustainability Science Program: <http://www.cid.harvard.edu/sustsci/index.html>

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## RECOMMENDED READING

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KATES, Robert W., ed. 2010. Readings in Sustainability Science and Technology. CID Working Paper No. 213. Center for International Development, Harvard University. Cambridge, MA: Harvard University, December 2010.

Robert Kates'<sup>1</sup> Reader in Sustainability Science and Technology has just been issued and is available at <http://tinyurl.com/sustsci-reader>.

The Reader offers an intellectual structure for the field of sustainability science, including the basic science of human-environment systems, the challenges of sustainable development that motivate that science, and the applications to specific problems that show its utility. This is not the only structure possible, but it is a deep and powerful one that many of us who "test piloted" the Reader have found to be enormously useful in ordering our own thinking.

Second, Kates has populated his map of sustainability science with a carefully selected set of individual readings, most published during the last decade but also including some of the classics that constitute the foundations of the field. Finally, he has provided invaluable context and

connections through his narrative introductions to his structuring of the field and his commentaries on the individual papers he has selected. The result is an original creation of great value and wisdom from which all interested in the field of sustainability science will benefit for years to come.

**A Work in Progress.** This first edition of the Reader is a work in progress. That work is being supported by the Sustainability Science Program at Harvard University, which I co-direct. At the urging of the author, this edition is freely available through the worldwide web; users are invited to redistribute it widely for unrestricted use in educational or research contexts. Subsequent evolution of the Reader may include a published version with copies instead of merely citations of its component papers, or a web-based version with links to its articles that are ac-

cessible to all at little or no cost. More ambitiously, we hope that future editions will incorporate feedback and suggestions from its users for better or additional papers. We have set up an email address [sustsci\\_reader@hks.harvard.edu](mailto:sustsci_reader@hks.harvard.edu) for comments. We hope to hear from our colleagues from all over the world.

**An Overview Abstract** (*provided by Robert Kates*): This Reader is one possible set of materials for advanced undergraduate and beginning graduate students of sustainability science. It consists of links to 93 articles or book chapters from which appropriate readings and internet sources can be chosen. Many of these can be downloaded, others need to be sought through University libraries. These are organized around three major domains of sustainability science: Part 1: an overview of sustainable development; Part 2: the emerging science and technology of sustainability; and Part 3: the innovative solutions and grand challenges of moving this knowledge into action.

The Readings begins with the history of sustainable development and its many concepts. Among these are the dual goals of sustainable development—the promotion of human development and well-being while protecting the earth's life support systems. Thus, the current status, long-term trends, and impacts of nine essentials for human well-being and seven of the essential life support systems are examined.

Part 1 concludes with the interactions of human society and the life support systems as these have been sketched—simply, realistically, and imaginatively.

Part 2 of the Reader focuses on what, why, and how to do sustainability science and technology. It begins with three essential qualities of the emerging science: its use or needs orientati-

on, focus on human-environment systems, and goal of integrated understanding. As a science in support of a sustainability transition, it is clearly value-driven and a second section of this Part considers the science of identifying and analyzing values and attitudes.

The third and fourth sections examine the current practice of the science, the analyses undertaken, and the distinctive methods and models used.

The distinctive knowledge created by sustainability science is use-inspired and, at its best, provides solutions to real-world, often place-based, problems encountered for the needs of a sustainability transition. Thus, the Reader ends with linking knowledge systems and action; examples of both global and local solutions to the needs of human well-being and the earth's life support systems; and three critical needs that constitute grand challenges: poverty, climate change, and peace and security.

## Notes

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