Environmental Social Sciences: Methods and Research Design

The relationship between human communities and the environment is extremely complex. In order to understand this relationship, interdisciplinary research combining natural sciences, social sciences, and humanities is necessary. Here, specialists summarize methods and research strategies for various aspects of social research devoted to environmental issues. Each chapter is illustrated with ethnographic and environmental examples, ranging from Australia to Amazonia, from Madagascar to the United States, and from prehistoric and historic cases to contemporary rural and urban ones. The volume discusses climate change, deforestation, environmental knowledge, natural reserves, politics and ownership of natural resources, and the effect of differing spatial and temporal scales.

Contributing to the intellectual project of interdisciplinary environmental social science, this book demonstrates the contributions it can make to environmental studies and to larger global problems, and thus will be of interest to social and natural scientists and to policy-makers.

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This book, *Environmental Social Sciences*, represents the best of what’s happening in social science right now: (1) it exemplifies the movement toward interdisciplinary research; (2) it rejects the pernicious distinction between qualitative and quantitative in the conduct of social research; and (3) it makes clear the value for all social scientists of training in a wide range of methods of collecting and analyzing data. I treat these in turn.

1. Interdisciplinary social science. Environmental science has always been an interdisciplinary effort. The *Science Citation Index* lists 163 journals in the category of environmental science. Look through the top 10 journals (the ones with an impact factor of 4.0 or more) and the range of disciplines is clear: biologists, chemists, meteorologists, paleontologists, geologists ... Increasingly, it is common to see articles – like one by Clougherty (2010) on gender analysis in the distribution of the effects of air pollution, or one by Knoke *et al.* (2009) on reconciling the subsistence needs of farmers in Ecuador with the need for conserving forests, or one by Rosas-Rosas and Valdez (2010) on the impact of fees from deer hunts on the willingness of landowners in Mexico to suspend killing of pumas and jaguars – articles that can only be described as social science. (We see this as well in medical science, where the very best journals now also routinely publish articles that also can only be described as 100% social science.)

Environmental social science is developing quickly within the environmental sciences, with Ph.D. programs in several universities, a major textbook (Moran 2010), and, now, this book on research methods.

2. Rejecting the qual–quant distinction. Whether it’s anthropology or sociology or geography, social scientists are often asked – no, required – early in their careers, to choose between humanistic and
scientific approaches to the subject matter of their discipline and between collecting and analyzing qualitative or quantitative data. Even worse, they are taught to equate science with quantitative data and quantitative analysis and humanism with qualitative data and qualitative analysis. This denies the grand tradition of qualitative approaches in all of science, from astronomy to zoology. When Galileo first trained his then-brand-new telescope on the moon, he noticed what he called lighter and darker areas. The large dark spots had, Galileo said, been seen from time immemorial and so he said, “These I shall call the ‘large’ or ‘ancient’ spots.” He also wrote that the moon was “not smooth, uniform, and precisely spherical” as commonly believed, but “uneven, rough, and full of cavities and prominences,” much like the Earth. No more qualitative description was ever penned (Galileo 1610: 3).

3. The need for training in a range of research methods. The chapters in this book make clear the importance for environmental social scientists of extensive training in methods. How much methods training is enough? No one can be expert in all methods of research, but increasingly, research projects demand expertise in multiple methods, including methods for collecting and analyzing qualitative data. Methods tend to be associated with disciplines, but they can never belong to disciplines. Anthropologists developed the method of participant observation, for example, but this method is now part of every social science. Sociologists are most associated with the questionnaire survey, but this method, too, is part of every social science. All social scientists, in my view, need training in research design, in several kinds of data collection (structured and unstructured interviewing, for example), and in data analysis. Anyone who works with survey data needs good skills in statistical analysis. Working with interviews or narratives or images requires training in text management.

We properly disagree with one another about epistemology – first principles in how we know anything at all – and about whether biological or material or cognitive forces predominate in explaining any given human phenomenon. Most social scientists, however, share a commitment to empiricism – to recording observations about how people think, behave, and feel. This shared commitment is made wonderfully clear in this book on methods in the environmental social sciences.

Dr. Russell Bernard
REFERENCES


Preface

This book resulted from our desire to achieve two goals. First, we wanted to assemble a volume that could help researchers and students interested in the social aspects of environmental issues to identify the methodological possibilities offered by social sciences. Second, we wanted to present the pluralistic, interdisciplinary mix of methods, and qualitative and quantitative approaches, found in contemporary research in this area. We hope readers will find our attempts successful.

We want to acknowledge our intellectual debt to the colleagues and teachers who have helped us understand the dynamic range of possibilities in environmental social science. Ismael and Eric specifically offer tribute to the Graduate Program in Environmental Anthropology at the University of Washington. Although now moribund, the “EA Program” flourished for over a decade and provided its participants (students and faculty alike) with a dynamic intellectual and social environment for exploring diverse and non-dogmatic approaches to environmental social sciences. In comparison to a decade ago, there are now a growing number of vibrant programs for environmental social science, and an expanding scholarly and applied literature.

Finally, we want to thank William Balée, Ashwini Chhatre, Steven Goodreau, Michael Gurven, Karen Lupo, Ronald Niezen, David Nolin, Laura Ogden, Laura Rival, Raja Sengupta, and Richard Stepp for their excellent contribution as external reviewers of the chapters included in this volume.