



# Center for the Environment

cornell social science

research on the

environment includes

natural resources

management policy and

practice; politics,

poverty, and environmental

degradation; and

environmental psychology

and communication.

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## Cornell Researchers Bring an Understanding to the Interconnectedness of the Natural World and Social Structures and Behaviors

Social scientists throughout Cornell conduct research on many aspects of the human dimensions of global and local environmental challenges. These researchers—often in collaboration with faculty in the natural sciences and in association with the Center for the Environment—look to societal, legal, institutional, and behavioral factors to explain how environmental values and behaviors shape the world around us, and how shifts in thinking and policy might help improve it.

Cornell’s portfolio of environmental social science research encompasses a broad spectrum of social science fields. Faculty in the College of Agriculture and Life Sciences study environmental communications, natural resources management policy, environmental sociology, resource economics, and international development. In the College of Human Ecology, researchers explore the relationships between the physical environment and human mental and physical health.

Studies at the School of Industrial and Labor Relations seek a better understanding of organizational and societal behavior underpinning the adoption (or non-adoption) of technical solutions. Using technologies such as the Internet and Geographic Information Systems (GIS), as well as innovative tools of public participation and dispute resolution, faculty in the College of Art, Architecture, and Planning study land use and environmental planning for social justice, natural disaster recovery, and ecological sustainability.

The researchers involved in these projects consider different scales at which society and the environment interact—international, national, regional, local—in a variety of contexts—watersheds, landscapes, protected areas—employing a range of theories and methods. Following are highlights of Cornell social science environmental research.

### Natural Resources Management Policy and Practice

Cornell faculty across several disciplines evaluate implications of actual and potential resource management practices and policies for communities, economies, and ecosystems.

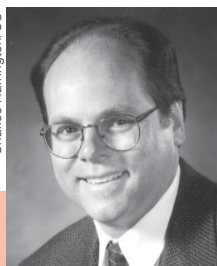
Research Associate Tommy L. Brown and Barbara A. Knuth and Daniel J. Decker, Natural Resources, Human Dimensions Research Unit, study the human dimensions of natural resource and environmental management policy, planning, and practice. They look specifically at stakeholder involvement processes and community-based natural resources management in the areas of wildlife, fisheries, and aquatic resources.

Charles Harrington/CU



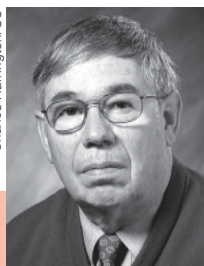
Barbara Knuth, Natural Resources, is a member of the department’s Human Dimensions Research Unit.

Charles Harrington/CU



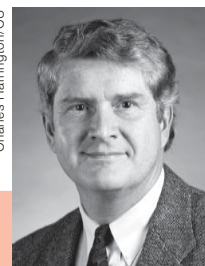
Max Pfeffer, Rural Sociology, studies land use control.

Charles Harrington/CU



Nelson Bills, Applied Economics and Management, studies the inter-relationships between agricultural practices and off-farm environmental impacts.

Charles Harrington/CU



David Lee, Applied Economics and Management, studies integrated watershed management.

Steven A. Wolf, Natural Resources, identifies key socio-economic and biophysical forest management objectives from the perspective of diverse stakeholders. He explores three forest use policy strategies: forest eco-certification, collective forest management by landowner associations, and expansion of professional consultation services to forest landowners. Wolf's research will result in definitions and policy prescriptions for forests that integrate biophysical and socioeconomic considerations; a foundation for monitoring key policy tools; and the advancement of shared values among key stakeholders.

With the rise of the recycling industry in the solid waste field, Michael P. Lounsbury, Industrial and Labor Relations; Sociology, studies the social and political dynamics that underpin the development of environmental solutions. His research highlights the non-neutrality of expertise and the sociological processes by which environmental solutions take shape. He also studies the dynamics of the recycling social movement and its effects.

Much tension has been caused by the creation or expansion of protected areas that are also inhabited by humans. Charles C. Geisler, Rural Sociology, studies human displacement caused by the expansion of national parks and protected areas. Drawing examples from Latin America and Africa, he looks closely at the tension between positive constructions of "nature," "conservation," and the environment *and* the involuntary, poorly compensated displacement and loss of rights of marginalized rural people.

In rapidly urbanizing areas, existing land uses are challenged by urban encroachment and attempts to regulate land use in new ways. Max J. Pfeffer, Rural Sociology, researches land use control. He examines the effects of environmental regulations on more remote rural areas as demands for protection of critical areas (watersheds, cloud forests, centers of biological diversity) lead to the expanded geographic scope of environmental regulations. His empirical work addresses sociological questions related to interest formation and the role of interests in social action.

There are growing tensions between farmland protection concerns and water quality management on farms and in watersheds. Nelson L. Bills, Applied Economics and Management, leads research and extension projects on

the inter-relationships between agricultural practices and off-farm environmental impacts, particularly in relation to these tensions.

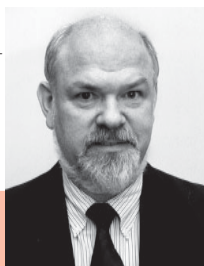
What motivates people to value and contribute to public environmental goods and to participate in environmental programs? Gregory L. Poe, Applied Economics and Management, explores this question by applying economic principles to his environmental research. Extending methods that he developed, he addresses issues such as marketing "green" electricity and assessing participation in New York State's voluntary Agricultural Environmental Management program.

David R. Lee, Applied Economics and Management, leads a project entitled "Supporting Community-based Responses to Increasing Water Scarcity through Integrated Watershed Management." This three-year project focuses on integrated watershed management in three watersheds in which Cornell scientists will team with collaborators in the northern Sierra region of Ecuador, Western Kenya, and the Cebu City, Philippines.

Norman T. Uphoff directs the Cornell International Institute for Food, Agriculture, and Development (CIIFAD). Together with nongovernmental organization (NGO), university, and government partners, CIIFAD is working in Madagascar to find institutional, technical, and policy alternatives that can help preserve that country's precious but dwindling forest ecosystems. With Ghanaian partners, Cornell faculty and students support community-based natural resource management plans that will preserve and enhance forest, land, water, and biological resources. The research concentrates on the impact of new water supplies on women, indigenous knowledge about agriculture and natural resources, alternatives to present charcoal-making methods, and appropriate agroforestry innovations.

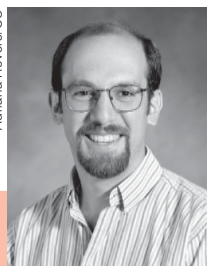
"What motivates people to value and contribute to public environmental goods and to participate in environmental programs?"

Nicola Kountoupes/CU



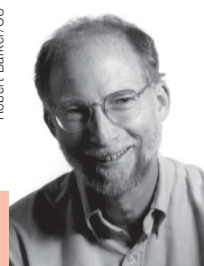
Norman Uphoff directs CIIFAD, which has a project in Madagascar to help preserve the country's dwindling forest ecosystems.

Adriana Rovers/CU



Paul Gellert, Rural Sociology, studies the complex interactions between humans and nature.

Robert Barker/CU



Gary Evans, Design and Environmental Analysis; Human Development, studies the consequences of environmental stressors such as residential crowding and noise.

Nicola Kountoupes/CU



James Shanahan, Communication, studies how environmental issues are covered in the media and the effects of the coverage on audience members.

## Politics, Poverty, and Environmental Degradation

"Cornell has particular expertise, and arguably a global comparative advantage, in research on environmental concerns in poor agrarian communities," asserts Christopher Barrett, Applied Economics and Management. He researches the dynamic inter-relationship between poverty and natural resources in Kenya, Madagascar, Morocco, the Philippines, and Southern Ethiopia. This topic is the focus of a National Science Foundation "biocomplexity" project that Barrett leads with Alice N. Pell, Animal Science, and other collaborators. They study how local, national, and international policy can facilitate the conservation of natural resources amid endemic poverty and institutional weakness.

Paul K. Gellert, Rural Sociology, aims to understand the complex interactions between humans and nature. He researches the political economy and ecology of natural resource exports in the global commodity chain. He has published on the impact of "megaprojects"—from timber and plantations to ports, mining, and dams—on landscapes and on displacements.

## Environmental Psychology and Communication

Researchers in the Colleges of Human Ecology and Agriculture and Life Sciences explore how individuals' environments effect their health and well-being. They also look at how awareness and understanding of environmental risks, as communicated through media outlets and educational programming, influence environmental attitudes and behaviors.

What effect do residential crowding, noise exposure at home and school, housing quality, and commuting behaviors and conditions have on children and their families? Gary W. Evans, Design and Environmental Analysis; Human Development, is an environmental psychologist who studies the consequences of these environmental stressors. He is involved in a longitudinal study of the role of environmental and social conditions on adverse physiological development in children. Evans is also developing a set of instruments to assess young children's environmental attitudes and behaviors that will help monitor changes with maturation, and could be helpful in evaluating environmental education programs.

Clifford W. Scherer, Communications, researches the communication of environmental health risks. He is particularly interested in its relationship to diverse stakeholders and differing levels of access to and understanding of scientific information. He explores methods for integrating quality, science-based information into social networks in rural areas.

James E. Shanahan, Communications, Media and Society Research Group, studies how environmental issues are covered in the mass media, and how audience members internalize environmental attitudes, beliefs, and behaviors from their media use. He has a particular interest in the communication of broad national and global issues such as global warming and biotechnology. Shanahan also studies wildlife management in collaboration with researchers and students in the Human Dimensions Research Unit of the Department of Natural Resources.

An understanding of the fundamental interconnectedness of the natural and social worlds is the basis for social science research described here. Environmental problems, and their solutions, are integrally tied to social structures and behaviors. Through their research, social scientists at Cornell are broadening understanding of these interrelationships and are contributing innovative solutions for global environmental sustainability.

*Max J. Pfeffer*

Professor of Rural Sociology and Associate Director, Center for the Environment

*Mary Schlarb*

Center for the Environment

Frank DiMeo/CU



Alice Pell, Animal Science, along with Christopher Barrett (not pictured), Applied Economics and Management, studies how local, national, and international policy can facilitate the conservation of natural resources amid endemic poverty and institutional weakness as part of the National Science Foundation "biocomplexity" project.

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