Chapter 24

Environment and Resources

Robert Winthrop

Rob Winthrop provides us with a comprehensive look at the domain of professional environmental anthropology. He begins by defining the field – which includes both "environment" and "resources" – and charting its history as a practice arena, noting in particular how it has been put together in terms of areas of focus and action. Winthrop then proceeds to describe in detail the career arcs of seven environmental practitioners, beginning with himself and noting career highlights and major areas of focus. He concludes his chapter with a thoughtful discussion of lessons learned and some observations on the ethics of practice.

The views expressed here are the author's and do not represent the policies of the US Department of the Interior.

This chapter describes the work of professional environmental anthropology: its areas of practice and the skills that contribute to success. Environmental anthropology as a professional rather than an academic career deals with practical problems and their solutions: protecting subsistence economies challenged by energy development, designing biodiversity conservation programs that support rather than undermine local communities, and finding locally appropriate strategies for adapting to climate change. The range of this work is suggested by the seven careers profiled below.

The chapter title "Environment and Resources" acknowledges both the breadth of the field and its dual character. The *environment* stands apart from human agency, an intricate web of air, water, minerals, plants, and animals which must be con-

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served, for it forms the precondition and context for human social life. Humans also appropriate many elements of this environment. These become *resources*, valued for particular benefits, extracted, and used. Such resources include caribou for the Iñupiat of Alaska's North Slope and salmon for tribes of the Pacific Northwest, but also timber, oil, coal, and copper to feed a global industrial economy. In practice, environmental conservation and resource use are often in tension. Yet both are legitimate objectives for professional environmental anthropology.

Defining the Field

Emergence of environmental anthropology

Over the past century environmental anthropology emerged as a distinct field as it developed more detailed and theoretically sophisticated accounts of the influence of ecological factors on the organization and practices of small-scale societies. Yet from the human viewpoint nature is also culturally constituted, seen "through a screen of beliefs, knowledge, and purposes" (Rappaport 1979: 97). Thus the field must also be concerned with the culturally specific frames through which environments and resources are experienced and utilized. This dual perspective is exemplified by E. E. Evans-Pritchard's classic work *The Nuer* (1940: ch. 1), which demonstrates both the material constraints and the worldview associated with a pastoralist society.

Since the 1970s environmental and resource policy has changed from a specialized interest to a major focus of grassroots advocacy, and national as well as international policy. Anthropologists mirrored this transformation, often shifting their research to a regional, national, or international scale of analysis, recognizing the relevance of public policy, and considering external forces promoting environmental change – including migration, war, development, and tourism. This methodological shift included much greater attention to ethical and practical issues, including biodiversity conservation, environmental risk perception, human rights, and environmental justice (Kottak 1999: 25–30).

Varieties of practice

At least in the United States, an academic worldview has so pervaded the teaching of anthropology that it is very difficult to appreciate the opportunities and rewards of a professional career. In the academic world, a person is largely defined by a research topic, for example, Professor Jones *is* a specialist in Dravidian kinship systems. The professional world is far more fluid. A master's or a doctoral degree may provide an initial toolkit. But professional work is defined not by one's initial training but by the needs of employers and clients and by broader research and policy priorities, which change – often dramatically – over time.

An anthropological career centered on environment and resources can involve a number of roles, but four have particular importance: operations (including program development and implementation), policy development, applied research, and advocacy. Several types of organizations can serve as the foundation for a professional career, and it is common to move from one to another as opportunities change. The options include several private sector variants (self-employed to large corporations), nonprofit organizations, government agencies, international or multilateral institutions (e.g., the World Bank), and the applied or consulting arms of many universities.

Professional practice on environment and resources covers a wide and diverse territory. Here I can only suggest some important occupational niches and a few sources for further reading, organized around four broad topics: resource sectors, management systems, environmental rights, and change factors.

- Specific *resource sectors* are the focus for many anthropologists, such as water (Treitler and Midgett 2007), fisheries (Wingard 2000), and ranching (Brogden and Greenberg 2003).
- *Systems for managing environments and resources* provide a second set of topics, including co-management (Feit and Spaeder 2005) and other management structures, common-pool resources (Agrawal 2003), land tenure systems (Chapin et al. 2005), and local practices for managing subsistence resources (Smith and Wishnie 2000).
- *Environmental rights and ethics* form a third group: environmental justice (particularly effects on health) (Johnston 2011), cultural rights relative to proposed environmental change (Winthrop 2002), and intellectual property rights, typically involving traditional ecological knowledge (Posey and Dutfield 1996).
- *Responses to change* provide the focus for a fourth group, which may also involve issues of environmental rights. These include climate change (Crate and Nuttall 2009), natural disasters (Oliver-Smith 1996), species loss and biodiversity conservation (Orlove and Brush 1996), economic development (Godoy et al. 2005), and resource extraction and pollution (Paolisso and Maloney 2000).

Careers

Robert Winthrop

Cultural anthropology was my focus of study, both for my bachelor's degree from the University of California, Berkeley and for my doctorate from the University of Minnesota. The research theme for my PhD has remained relevant throughout my career. In the face of externally imposed change, how do communities preserve cultural autonomy and agency? How do established patterns of meaning and social organization (a "tradition" and "way of life") guide adaptation and innovation?

To date my working career has had two phases. Beginning in the early 1980s I lived the freedom and insecurity of small business, working in the western United

States primarily on conflicts between proposed development and American Indian cultural rights and values. In 2002 I shifted from the private to the public sector, from the west coast to the east, and from running Cultural Solutions (my small consulting practice) to leading the Socioeconomics Program at the Interior Department's Bureau of Land Management (BLM).

The decision to establish a small business reflected more fundamental choices: my wife (an archaeologist) and I weren't interested in academic careers, and we wanted to raise our family in southern Oregon. The business opportunity centered on abundant federal lands and resources in the Pacific Northwest, strong federal statutory protections for archaeological sites, and strong rights and interests of tribes over the use of public lands within their traditional territories. With another archaeologist partner we formed a small business, handling both archaeological and ethnographic studies.

My research was very field-focused, using ethnographic tools to decipher a problem involving specific communities, a specific terrain, and a specific proposal. My clients were companies proposing resource development involving federal lands or licensing, federal agencies managing those lands, and (occasionally) tribal governments. Regardless of who paid the bills, the ethical framework remained the same: to provide a professionally competent analysis of the issues in question, to work collaboratively and honestly with tribal communities, and – when consistent with the first two objectives – to help the client advance its goals.

Here is an example. State Power,[1] which operated a hydroelectric dam in Washington state, applied to the Federal Energy Regulatory Commission (FERC) to renew the facility's license. The dam lay within the pre-reservation territory of the River People, a federally recognized tribe, whose treaty provided significant rights over fishing, hunting, and gathering. After the River People intervened with FERC to oppose the facility's relicensing, FERC ordered the utility and the tribe to collaborate on a study of the effects of continued dam operations on traditional tribal uses of the area.

I was retained by State Power to conduct the study. Negotiating a research protocol with the River People took over a year. Among its provisions were that the utility would pay the salary and expenses of a tribal employee to work with me in a fully collaborative role, and any disagreements between the utility and the tribe regarding the interpretation of evidence, analysis of effects, or recommendations for mitigation would be fully documented in the report. My tribal colleague and I jointly conducted interviews and archival research and gave a joint presentation on our findings to a meeting of tribal council members and utility representatives. Our research broadly confirmed the adverse effects of continued hydroelectric operations: the decline of fishing-based communities above the dam, and the indirect effects on trade, travel, subsistence, and ceremonies across the region. Shortly after we presented our report, the utility board of directors and the tribal council began direct negotiations over the fate of the dam.

By 2000 I was ready for a change, but my anthropological training seemed rather narrow for a career switch. To get a broader grounding in the social sciences, I returned to graduate school for an interdisciplinary master's degree at George Washington University, which allowed me to study economics, political science, and

business. In 2002, shortly after completing the degree, I was hired to lead the Socio-economics Program at the Interior Department's Bureau of Land Management in Washington, DC. The geographic canvas of the agency is very broad, ranging from the Arctic Ocean to the Mexican border. The organization's scale is also rather different from Cultural Solutions: some 10,000 agency employees, spread across some 150 offices and 12 regions, who manage an enormous range of land and resource uses.

My own work has two aspects. The first is programmatic: working with colleagues to provide capacity for effective socio-economic analysis across the agency through guidance, training, staffing, contracting, and quality assurance. The second involves responding to specific scientific and policy challenges. In some cases I do substantial work on a problem; in others my role is mainly to encourage and review the work of other colleagues. (Moral: If you need individual recognition, look for an academic job.) Many issues involve a combination of technical, policy, and organizational challenges. Examples of projects on which I've worked as part of a team include:

- revising BLM's planning regulations to give a stronger voice to local and state governments and tribes;
- identifying practical methods for modeling the human benefits of healthy ecosystems, to allow more realistic assessments of the costs and benefits of resource development;
- preparing a strategic plan for strengthening compliance with environmental justice principles across the agencies of the Interior Department; and
- advising the US Global Change Research Program on strategies for better integrating the social sciences into its predominantly natural science research program.

Diane Russell

Dr. Diane Russell's career has emphasized community-based conservation within the framework of international development. Her work has centered on the social and institutional dimensions of forestry and market-based approaches to conservation and natural resource management. She earned degrees in anthropology at Barnard College (BA) and Boston University (PhD), and subsequently completed a master's in environmental management at Yale University's School of Forestry and Environmental Studies. Diane Russell's field experience includes Central Africa and the insular Pacific.

From 2001 to 2005 Russell was based in Nairobi, Kenya as the program director for Trees and Markets at the World Agroforestry Centre. Since 2005 she has served as biodiversity and social science specialist with the US Agency for International Development (USAID) in Washington, DC. Russell's current work stands at the interface of livelihoods and conservation, advising USAID's efforts at headquarters

and in overseas missions on the social and institutional aspects of biodiversity conservation, climate change, and sustainable agriculture (Russell and Harshbarger 2004). Asked for an example of success, she noted:

> I've been working in Liberia since 2005 to help the USAID Mission develop a program in community forestry. This project helps put significant blocks of forest in the hands of local communities and has contributed to major changes in Liberia's Forestry Development Authority, which was once the tool of warlord Charles Taylor . . . It's been incredibly rewarding to . . . work with colleagues willing to take risks in trying a completely new approach to forestry in Liberia.[2]

Katy Moran

The anthropologist Katy Moran has had an accomplished career, serving as a legislative aide in Congress, a program analyst for the Smithsonian, and director of the nonprofit Healing Forest Conservancy (HFC). Her work across these varied positions is linked by a common concern for the interrelation of environmental conservation and cultural integrity, and the search for policies and programs that promote both. Moran received an MA in applied anthropology from American University, writing a thesis on elephant management practices in Sri Lanka and their implications for wildlife conservation.

Based on her research on the social and economic dimensions of conservation, Representative John Porter hired her to coordinate a new policy effort, the debt-for-nature swap. *Debt for nature* is a policy that allows developing countries to be relieved of a portion of their debt burden in return for adopting environmental conservation measures: typically by preventing the degradation of forests or other designated habitat. Representative Porter's bill became law in 1989, establishing an important new tool in conservation policy.

Katy Moran established HFC in 1992 to foster the equitable provision of benefits for communities willing to share traditional ecological knowledge in the development of new pharmaceuticals, "biodiversity prospecting." As with the debt-for-nature swaps, with HFC Moran applied her anthropological and policy skills to formulate much needed solutions in another complex and controversial area of international policy, balancing conservation and the use of biodiversity (Moran et al. 2001).

Kevin Preister

Kevin Preister's career has focused on improving the quality of land use planning and project design, both government and corporate, to achieve environmentally and socially sustainable outcomes. The central strategy of his work is understanding and engaging the local social systems that structure neighborhoods, communities, and regions in the search for innovative, locally acceptable solutions to complex

environmental and resource decisions. Preister earned a PhD at the University of California at Davis with a dissertation on the economic transition of Oregon's south coast from natural resources to trade and services. As senior associate at James Kent Associates and subsequently director of the Center for Social Ecology and Public Policy, he has worked to build support for collaborative approaches to resource management, particularly among federal land management agencies.

Going beyond the often sterile procedures for public involvement, much of the work by Kevin Preister and his colleagues seeks to expand governments' capacity for effective engagement by stressing the value of two-way communication through informal social systems such as community networks (see www.jkagroup.com). Making this argument in the context of climate change policy, Kevin Preister and James Kent wrote:

> A central challenge for a new approach to global warming is the creation and integration of scientifically-valid and culturally-appropriate policy strategies for addressing carbon emissions. If we as a global society are unable to link the formal institutions with the informal systems of communities concerned with survival and caretaking, the policy choices will by default become regulatory, draconian in their consequences, high in political and monetary costs, and limited in their effectiveness. (Kent and Preister 2012: 1–2)

Diane Austin

Diane Austin is associate research professor at the University of Arizona's Bureau of Applied Research in Anthropology (BARA), where she has worked since 1994. As an institutional base for anthropological practice, BARA represents an interesting hybrid, conducting applied studies that address a range of practical problems of the environment, development, and tribal cultural preservation while integrating these activities with scholarship and professional training (see http://bara.arizona.edu). Austin's training includes an MS in environmental engineering from the California Institute of Technology and an interdisciplinary PhD in natural resources and environment from the University of Michigan, which combined cultural anthropology, environmental policy, and environmental psychology.

Diane Austin has led applied research on a wide range of environmental topics, including social impacts of offshore oil and gas production on Gulf of Mexico communities, the impacts of natural resource development on Southern Paiute communities, and a range of projects addressing critical environmental health issues along the Arizona–Sonora border. Much of her work adopts a community-based participatory research approach, supported by long-term partnerships with government, nongovernmental organizations, universities, and businesses (Austin 2010). In a bi-national coalition that addresses water, waste, and air quality issues in the Arizona–Sonora border area, Austin has led group efforts to design and conduct initial assessments, develop pilot projects to convert waste products into resources, and promote the expansion of successful projects into larger initiatives.

Lucinda Power

Lucinda Power's work at the Environmental Protection Agency (EPA) focuses on watershed and ocean policy, and the local social systems needed for sustainable environmental management. She received a master's in applied anthropology from the University of Maryland in 2005, with concentrations in environmental anthropology and water resource management. Her master's research concerned environmental and heritage values in Maryland's Eastern Shore communities of Chesapeake Bay, as these shape the receptivity to state and federal watershed management programs (Power and Paolisso 2007). The Chesapeake Bay ecosystem, one of the world's largest and most productive estuaries, has been seriously compromised because of nitrogen and phosphorus pollution from wastewater treatment plants, agricultural runoff, and other activities. Restoring the ecological health of the bay is a major goal of current federal environmental policy.

While completing her graduate studies Power served on the staff of Coastal America, a partnership of federal, state, and local governments and nonprofit organizations to strengthen the management and health of America's coastal ecosystems. She began her career at EPA in 2007, working primarily on ocean policy and the development of environmental regulations. In 2011 Power became an environmental protection specialist at the Chesapeake Bay Program Office, coordinating state- and locally driven watershed restoration planning and project implementation. Her training and experience have been particularly valuable in two aspects of these efforts: understanding local social systems to enhance outreach and collaboration, and documenting local environmental knowledge to complement information on the Chesapeake Bay ecosystem provided by the environmental sciences.

Luisa Maffi

Luisa Maffi has combined linguistic and environmental anthropology to explore the relationship between sustaining the vitality of indigenous languages and cultures and conserving biological diversity. Maffi received her BA in linguistics from the University of Rome. After linguistic research in Somalia, she moved to the University of California, Berkeley for doctoral studies in anthropology, joining an ongoing research program in Chiapas on Tzeltal Maya ethnobiology. Moving from the conventional role of academic researcher to that of scholar-activist-NGO entrepreneur, Maffi provides an interesting case study in the changing nature of environmental anthropology.

The preservation of biodiversity is commonly thought to be incompatible with human activity, hence the frequent (but usually unsuccessful) conservation strategy of creating nature preserves walled off from human use. In 1996 Maffi and a number of colleagues founded Terralingua (www.terralingua.org), a nongovernmental organization which worked from a different premise, namely "that biological, cultural, and linguistic diversity are co-evolved, interdependent, and mutually reinforcing."

They termed this *biocultural* diversity: "Healthy environments, resilient cultures, and vibrant languages are a matter of social justice and basic human rights."[3] With Luisa Maffi as its director, Terralingua has pursued multiple strategies to support biocultural diversity. These include developing indicators of linguistic diversity and traditional environmental knowledge to quantify conditions and trends; supporting indigenous peoples' efforts to record their oral traditions; promoting international policy for biocultural diversity; guiding a community of practice, based on lessons from 45 biocultural diversity projects; and creating modules for teaching an integrated biocultural diversity curriculum in high schools (Maffi and Woodley 2010).

Summing Up

Professional effectiveness

Based on my own experience and the careers of the six colleagues described above, here are some recommendations for building a successful professional career.

- Pursue a professional career for the right reason. The professional practice of environmental anthropology is demanding, and failure to perform well has real life consequences. Those who see a professional career as a second-best to an academic one are advised to stay on campus or pursue another line of work.
- Do work that interests you. Given the many areas of professional practice involving environments and resources, there is opportunity for choice. If no job is available that fits your career goal, consider creating your own firm or nonprofit. Of the seven careers profiled here, four of us took that path. (Incidentally, it's not easy.)
- Maintain a scientific outlook, and communicate your findings clearly. Rigorous empirical research and clear conclusions are expected. Pseudo-philosophical reflections couched in postmodernist jargon are not. Diane Russell commented: "Get away from social science fads and jargon, as your work will be not be understood or used."
- Combine quantitative and qualitative methods whenever feasible. Traditionally, ethnography has involved both. Yet a 2010 study observes that recent publications in environmental anthropology "have substantially less quantitative and environmental data than in earlier decades" (Charnley and Durham 2010: 411). Ethnography is good at providing significant detail, but without quantification it is often impossible to discern patterns, to draw broader insights, or to contribute effectively to project teams usually dominated by natural scientists.
- The first lesson I learned as a consultant in Indian country was: collaborate or leave! The central role of collaboration is a common theme in many of the careers profiled here.

- Develop competence in more than one field. Most research, policy, and program development in the realm of environment and resources involves a mix of disciplines. Conversely, while ethnography has been anthropology's hallmark, many other disciplines now include training in qualitative methods. Additional skills translate to added effectiveness. As Diane Austin noted, "A solid background in the natural and physical sciences, along with an anthropological perspective, has been critical to my success."
- Understand the public policy relevant to your areas of practice. Treaties, laws, and regulations provide the institutional framework for managing environmental change. Working on environment and resource issues without understanding this framework is akin to navigating without map or compass.
- Develop good organizational skills. Employers will expect you to be competent at managing projects, preparing and tracking budgets, and organizing work teams.

Ethics

Conducting oneself with honesty, integrity, and fairness should be a cornerstone of any career in science, business, or government. Doing so successfully requires both attention to shared guidelines or principles, and one's own growing experience and judgment. To see how such principles can be translated into professional practice, consult the Society for Applied Anthropology's statement on "Ethical and Professional Responsibilities" and the National Association of Environmental Professionals' "Code of Ethics and Standards of Practice."[4]

Major resource management proposals often involve a powerful proponent with a large investment at stake (such as the Trans-Alaska Pipeline), a host of allies and opponents, and a government agency cast in the role of umpire. Yet in 20 years of consulting only once did I have a client try, unsuccessfully, to change my findings, and that was a government agency. Corporate clients understand the regulatory framework under which such decisions are made and, in my experience, generally abide by it. The lesson is: ethical professional engagement is enhanced by shared ground rules and a reasonably transparent decision process.[5]

Resources

Almost all effective anthropological practice in this area crosses disciplinary lines. Participating in the theoretical and practical discussion fostered by interdisciplinary organizations is an antidote to the self-reference and intellectual isolation that characterizes much contemporary cultural anthropology. Here are three groups appropriate to resource management and social impact assessment, each of which publishes an important journal:

- International Association for Society and Natural Resources (www.iasnr.org)
- National Association of Environmental Professionals (www.naep.org)
- International Association for Impact Assessment (www.iaia.org).

Finally, research-oriented environmental organizations can be excellent sources of information. I would recommend these two:

- Resources for the Future (www.rff.org)
- World Resources Institute (www.wri.org).

Notes

1 The names are pseudonyms.
2 Where not otherwise noted, quotations from the anthropologists profiled here are from email communications dated March and April 2012.
3 http://www.terralingua.org/about-2/, accessed Sept. 5, 2012.
4 http://www.sfaa.net/sfaaethic.html and http://www.naep.org/code-of-ethics, both accessed Sept. 5, 2012.
5 See Ch. 26 in this volume.

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