CHAPTER 1

The Background to Community-based Conservation

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The focus of conservation concern and debate has changed throughout history in response to new problems, concerns, and knowledge. One approach, newly emergent, is community-based conservation, or CBC. Community-based conservation arises from within the community—or at least at the community level—rather than internationally or nationally. The irony, of course, is that community-based conservation is hardly new. Communities down the millennia have developed elaborate rituals and practices to limit offtake levels, restrict access to critical resources, and distribute harvests (Croll and Parkin 1992).

Conservation in History

Traditional conservation practices revolved around sustaining food supplies such as fruiting trees or wildlife or protecting cultural symbols, whether totemic animals or religious sites. Conservation, in other words, originated in prehistory as practices that satisfied human needs, not as an altruistic concern for animals and plants. Despite the conservation practices of ancient times, as early as the Paleolithic period of the Stone Age the survival of the wild had more to do with low human population density, limited technology, and undeveloped or restricted markets than with self-imposed human restraint. When resources ran out, new lands for human habitation were always available.

Moving on in pursuit of fresh resources remained an option during the early Neolithic, even as pastoralism and shifting agriculture emerged. Movement, whether nomadic, transhumant, or wholesale relocation, enabled humans to optimize resource use and sidestep the consequences of overexploitation.

Movement didn't entirely obviate the need for conservation or inhibit compassion for other forms of life. Evidence from contemporary traditional societies suggests that a holistic sense of the world was common to most cultures. Many cultures and religions (including the faiths of Hindus, Buddhists, and native

Americans) still retain a strong sense of the indivisibility of humanity and nature (Kemf 1993).

Where space was lacking and prey species had evolved in isolation from humans, conservation practices often were ineffective. Evidence from oceanic islands, for example, shows a sharp rise in extinction rates with the arrival of seafaring peoples (Olson 1989). Large-mammal exterminations in the New World during the Pleistocene bear evidence of overkill by early hunters (Martin and Klein 1984). Indeed, traditional conservation practices probably evolved more to maximize and allocate harvests than to conserve supplies (see MALUKU ISLANDS). Moreover, many traditional societies, given modern weapons, overhunt their prey, as discussed in NEOTROPICAL FORESTS. Traditional conservation beliefs, in other words, are not ready-made prescriptions for today's world.

The Rise of Modern Conservation

Populations expanded and grew more sedentary during the Neolithic. Historical evidence points to localized resource depletion and abandonment of agrarian and urban centers as early as 3000 B.C. (Southwick 1976). In classical Greece, Aristotle and Plato wrote almost as persuasively as the twentieth century's Aldo Leopold about landscapes withering under the onslaught of livestock. "What now remains compared with what then existed," Plato noted, "is like the skeleton of a sick man, all the fat and soft earth having been wasted away, and only the bare framework of the land being left" (Rodes and Odell 1992).

By pharaonic times, wildlife was scarce in Lower Egypt. The ruling elite there established the first recorded wildlife reserves in order to assure themselves of quarry on hunting expeditions. A similar devastation of wildlife was repeated across the Middle East, Asia, and Europe as populations grew, settled, and transformed the natural landscape for arable farming, husbandry, and forestry. The same issues arose time and again with each cycle of settlement and resource depletion: Who owns wildlife? Who owns the forest? Who owns the land?

The aristocracy almost invariably won such disputes and denied the peasants who lived on their land or around royal hunting preserves access to wildlife (Thomas 1983). Disputes over forest land and products were particularly contentious, culminating in the rise of forestry practices in eighteenth-century Europe (Nash 1967) and the first forest conservancies, established by the British Raj in India during the mid-nineteenth century (Vedant 1986).

By the 1850s, a new conservation sensibility emerged alongside the romantic movement in Europe and the United States (Nash 1967; Thomas 1983). Humanitarian concerns for the poor, the enslaved, and the disenfranchised soon spilled over into demands for ethical treatment of animals. By 1869, expanding sensibilities led John Stuart Mill to advocate the preservation of species for their own sake, independent of their utility for humans (Thomas 1983).

The rise of a modern conservation consciousness and conscience gathered mo-

mentum in the late nineteenth century, as the wilds disappeared and rural communities became urban. Forest reserves, national parks, and hunting laws familiar to twentieth-century conservationists came into being, although nineteenth-century motives were decidedly more political and utilitarian than preservationist. The question of who owned wildlife and who had the right to shoot it, for example, intensified and became closely tied to egalitarianism in the United States and, to a lesser extent, in Europe (Tober 1981). Early national parks mostly were intended to save natural monuments and open space for recreation rather than to preserve vignettes of nature (Runte 1979).

Sustainable use nevertheless was the best way to preserve nature, according to U.S. President Theodore Roosevelt's chief forester, Gifford Pinchot. Pinchot, the self-proclaimed founder of American conservation, advocated efficiency and prudence in the profitable and sustainable use of natural resources. Conservation, in this new doctrine, was "the application of common sense to the common problems for the common good" (Shabecoff 1993). Stripped of its rhetoric, Pinchot's sustainable-use policy signaled President Roosevelt's intention to restrain big businesses' abuse of public lands.

The sustainable-use doctrine also lent legitimacy to efforts to conserve land for the public good. The movement gained an aura of scientific respectability in later years, when mathematical population models were used to calculate maximum sustained yields for natural-resource harvests (Holt and Talbot 1978). But the very pragmatism of Pinchot's wise-use conservation proved abhorrent to the spiritualists and romantics led by preservationist John Muir. The first salvo signaling a deep rift in the conservation movement was about to be fired.

The Diversification of Conservation

The standoff first arose over plans to dam and flood Hetch Hetchy Valley within Yosemite National Park to provide water for San Francisco. Roosevelt and Pinchot came down on the side of exploitation and Muir on the side of preservation. The gap between pragmatists and preservationists widened after World War II, when the archdruid of modern preservationism, David Brower, assumed the directorship of Muir's Sierra Club and opposed dams in Dinosaur National Monument and the Grand Canyon (Shabecoff 1993). In later years, the split widened further when the animal rights and deep ecology movements surfaced and began to champion the interests of species and nature on ethical and moral grounds (Nash 1989).

The preservationists had reason to be skeptical. Impressive as early conservation successes had been in the United States, powerful commercial counterforces waged war on the preservationists. These forces were behind the introduction of laws and policies that encouraged, mandated, and often subsidized the private exploitation of public water, land, timber, minerals, and fisheries (Wilkinson 1992). The underlying goals, which foreshadowed similar resource policies elsewhere, were to boost the United States' national economy, encourage settlement, and

strengthen international trade. Once the forces of utilization were unleashed, however, they ran on, blind to ecological limits and environmental destruction. In many other cases, society's ability to sustainably manage living resources ranging from wild species in the Peruvian rain forest (see AMAZON) to trochus shells in Indonesia (see MALUKU ISLANDS) also has proved illusory (Talbot 1993).

Preservationists scored victories in 1908, with the introduction of the wildlife refuge system in the United States, and with the establishment of a series of game reserves and parks in Africa at much the same time. In the developing world, conservation by and large became the state's responsibility, both during and after the colonial era.

State policies and legislation both regulating the use of natural resources and protecting nature continued apace, however, throughout the early part of the twentieth century as population and commerce burgeoned. The rationale echoed those common to Britain's Indian conservancies and Roosevelt's national forests: commercialism and local interests were said to cause environmental destruction inimical to the state. Using this well-honed argument, governments intervened time and again to secure land and resources in the larger interest of society. State land ownership and conservation became unquestioned norms, whether or not they were called for or worked.

Renewable-resource use and preservation have served the environment well, but neither approach has proved sufficient. Both often have fared badly in the face of population growth, poverty, and commercialism. At one extreme, international forces such as trade and economic incentives undermine conservation efforts. At the other, government indifference and incompetence—often intensified by commercial greed, nepotism, corruption, and local hostility—have swelled the tide of destruction. Finally, both utilization and preservation policies falter wherever land tenure and access rights are ill defined. The problem is most acute in areas where national policies deprive local communities of the right to use the resources on their own land. The resulting us-versus-them rush to harvest is the root of resource depletion.

The weaknesses in Pinchot's and Muir's philosophies raise the question of whether prevailing policies, which isolate the interests of local communities from those of the state, are the only or even the best ways to go about conservation. A countertrend, based on the belief that local participation in decisions and benefits could reduce hostility toward conservation efforts, began to emerge in the late 1960s and 1970s (see AMBOSELI). The resulting first small steps in the direction of community participation in conservation were hastened by several developments.

Prelude to Community-based Conservation

The first development involved mounting threats to the environment in the face of careless technology, consumerism, and the population explosion. Rachel Carson's

Silent Spring (1962) and the Ehrlichs' *Population Bomb* (1968) alerted the public to these threats. Earth Day 1970 made *environment* a household word in much of the world, and the surrounding issues later gained political recognition through the United Nations Conference on the Global Environment held in Stockholm in 1972. Recognition paid off: International conservation conventions mushroomed in the years that followed.

Despite some progress, conservation efforts still revolved around saving high-profile species and habitats. This was to change in the next decade, once the oil crises instilled conservation in Western consciousness and conservationists broadened their horizons to encompass biodiversity and biological processes (IUCN, UNEP, and WWF 1980). Conservation's expanded horizons stretched far beyond parks onto rural lands, where the ultimate threat to biodiversity lay. Just how conservation was to be tackled in rural areas was an issue that remained disturbingly vague, invoking the aspirations of future generations while ignoring the problems of the rural poor (Western 1984).

The second precipitating factor involved grass-roots development. The centrally planned, capital-intensive aid projects begun in the 1950s and based on both altruism and self-interest had done little to alleviate poverty and income disparity in the developing world, despite the grandiose dams, irrigation projects, power stations, roads, and industrial developments that resulted. Integrated rural development (IRD) projects became fashionable but, again, failed with disconcerting regularity. The causes included continued centralization of planning and overly ambitious projects. The grass-roots approach, in contrast, focused on participation and local aspirations (Chambers 1983). To a significant degree, small-scale projects based on resource use did emerge during this period, thus laying a foundation of experience for community-based conservation.

The grass-roots approach recognized rural communities' dependence on sustainable use of natural resources such as soil, water, grazing land, forest products, and wildlife. This recognition conceded the case long made by the Pinchot school. What had been missing in Pinchot's approach, according to rural sociologists, was a local say and stake in resource use. Free to define their own priorities, local communities, in theory, would develop at their own pace and in their own way. They would learn their own lessons and build up their own skills in everything from health care and education to water management and communal forestry (Uphoff 1985).

Grass-roots development was not an unqualified success. The 1970s oil crisis, in particular, put severe economic strain on developing countries. Recently, however, the grass-roots approach has matured and come to play an ever larger role in development programs around the world (Durning 1989; Hirschmann 1993).

The third precipitating factor involved the human rights and indigenous peoples movements. Both drew attention to disenfranchised rural communities such as the Yanomami in Brazil and the Aboriginals of Australia (Berger 1979; Miller

1993). Internationally, developing countries' claims of North-South inequality led to demands for a new world economic order based on redistribution of wealth. Radical grass-roots organizations promoted populist movements as an alternative to government assistance (Hellinger, Hellinger, and O'Regan 1988). As a result, groups that linked social justice for ethnic minorities with environmental health became increasingly vocal.

Environmentalism and Democracy

The upshot of these convergent developments was a heightened sensibility about the environment and the interests of local people. A shift away from the elitism that had dogged the largely urban and Western preservation movement finally was under way. As much as anything, the shift acknowledged the fact that the fate of most of the earth's biological diversity lay in the hands of poor people in the Third World. Conservation and development no longer were John Muir's irreconcilable forces on either side of the divide. In a startling turnaround from the protectionism of earlier conventions, the theme of the Third World Parks Congress of 1982 was CONSERVATION FOR SUSTAINABLE DEVELOPMENT. The published proceedings drew on a handful of case studies to show how protected areas could contribute to human welfare and increase security in the process (McNeely and Miller 1984). The emphasis was still decidedly on buffering parks, but the move from preservation to multiple use of protected areas was clearly under way.

By the mid-1980s, conservation took on new urgency as environmental degradation accelerated and ecologists' warnings of impending mass extinctions captured public attention. Chernobyl, confirmation of greenhouse warming, and the development of a hole in the ozone over the Antarctic left no doubt about the connection between consumer habits and the state of the environment. The heightened awareness created fertile ground for economic development in a greener shade. The World Commission on Environment and Development's (1987) *Our Common Future*—or the Brundtland Report, as it became known—brought political respectability to the marriage of ecology and economics. The link was not simply academic; neither was it lost on politicians confronted with public demands for clean air and water, curbs on insecticides and pesticides, and a halt to whaling and tropical-forest destruction.

Several other events presaged a sharp turn toward local participation and rural-based conservation during the last decade. The end of the Cold War provided perhaps the biggest fillip to environmental issues and conservation. The environment and sustainable development quickly assumed high priority on the international agenda, culminating in the United Nations-sponsored Earth Summit. The summit, held in Rio de Janeiro, Brazil, in 1992, drew together 120 heads of state to discuss the state of the environment.

Calls for democratization and liberalization, spurred by the collapse of commu-

nism, also triggered demands for equitable resource allocation and a local voice in conservation. Centralized control over conservation and natural resources, tightened over decades, began to loosen. Regional and local autonomy took hold—although not without their own weaknesses.

Yet another significant shift was the new emphasis on biodiversity and bioethics. Demonstrations of the strategic value of biodiversity, for example, added weight to the argument for sustainable development advocated in the Brundtland Report. The animal rights movement, with a voice grown powerful in calls for whaling and ivory trade bans, developed its own strong following. Both approaches, unfortunately, also deepened tensions and disagreements over conservation, particularly between rich and poor nations.

At the root of these tensions are two opposing rights: the right of communities to assume control over their land and resources, and the right of outsiders to deny them the use of species and resources. One force of liberalization is pushing for community rights; the other, as in the case of the animal rights movement, calls for even more stringent controls.

New terms such as *ecotourism, green economics, intergenerational equity, debt-for-nature swaps, green consumerism,* and *people-based conservation* sprang up, tracking the shifting environmental sensibilities. Out of this ferment of concern and flurry of activity has arisen the ill-defined concept called community-based conservation. In community-based conservation, the emphasis has moved from the top to the bottom, from the center to the periphery, from the elite to the poor, and from the urban to the rural. The shift has opened the door on the biggest conservation challenge of all: how to deal with the vast majority of the earth's surface, where there are no parks and where the interests of local communities prevail.

A Shift in Focus: Community-based Conservation

Community-based conservation includes, at one extreme, buffer-zone protection of parks and reserves and, at the other, natural resources use and biodiversity conservation in rural areas. The term covers both new and traditional conservation methods, as well as conservation efforts that originate within or outside a community, so long as the outcome benefits the community.

Community-based conservation reverses top-down, center-driven conservation by focusing on the people who bear the costs of conservation. In the broadest sense, then, community-based conservation includes natural resources or biodiversity protection by, for, and with the local community (see INSTITUTIONS).

The deeper agenda, for most conservationists, is to make nature and natural products meaningful to rural communities. As far as local communities are concerned, the agenda is to regain control over natural resources and, through conservation practices, improve their economic well-being.

Defining community-based conservation any more precisely would be futile and even counterproductive. As the case studies demonstrate, community-based conservation intentionally includes a range of activities practiced in various corners of the world that directly or indirectly lead to conservation. The coexistence of people and nature, as distinct from protectionism and the segregation of people and nature, is its central precept.

If community-based conservation can not be defined simply, detailed case studies from around the world at least can convey a sense of what it entails. But gauging the strengths and weaknesses of this new and growing emphasis in conservation requires a further step: an appreciation of the very diversity encapsulated within the many approaches to community-based conservation. The disagreements on definition, too, are significant in themselves. Both diversity and disagreements draw attention to the many actors involved and to the reasons why they see things differently.

The broad meanings of *community* and *conservation* also make community-based conservation hard to pin down. Should *community* be defined by ethnicity or traditions, by the length of a group's residency, or by a sense of common purpose? Or, given the great flux and transition in most societies—the global village in the making—is *community* best defined by geographical and conservation context? *Community*, in this case, would have to include immigrants, cultures in transition, and those with no ancestral ties to the land or to each other. As development professionals have discovered (see PARTICIPATION), even traditional communities are rife with internal conflicts and divergent interests and often split along economic, gender, and social lines.

And what of *conservation*? Does this term exclusively connote the preservation of pristine natural ecosystems and species, as many preservationists argue? If so, few areas today qualify for conservation; fewer still have escaped humankind's imprint at some point in the intervening ages since the Pleistocene. Is conservation about the right of any and all species to find a living space on this overcrowded planet? Is it, more broadly yet, about maintaining the diversity of life, albeit modified by humanity? Or, more vitally, is it about the global ecological processes that sustain natural resources and the environment and, ultimately, our physical and emotional well-being?

The meaning of *community* varies with context, just as perceptions of nature vary around the world (see CULTURE). Cultural views, attitudes, and values are no less varied than biodiversity and defy a unified ethic of the natural world (see CHALLENGES). Simply sticking a label on locally based efforts does not create a new field of conservation.

Community-based conservation is growing of its own accord, despite the obstacles. What is most needed is recognition of a neglected set of participants and acknowledgment of the rural landscape's significance in conservation. Above all, the opportunities and challenges of community-based conservation need to be explored and encouraged.

The Potential of Community-based Conservation

Fortunately, a loose definition of community-based conservation does not preclude exploration of its potential or the challenges it poses. Clearly, community-based conservation is essentially about the locus of action. The locus may define the place but not necessarily the opportunities or what is at stake. Community efforts open up the bulk of the earth's landscape, often written off as ecologically sterile and hopeless for conservation. Ecologists and conservationists have only just begun to turn their attention to rural areas and seriously examine (or, more correctly, rediscover) the options for coexistence. If these efforts succeed, biological losses will be minimized, and protected areas will become less important (Western 1989).

At stake is nothing less than the fate of the natural world and its resources. In rural areas, humankind has the chance to value land, live within it sustainably, and learn how to coexist with nature. The alternative is a biologically and physically degraded world. Overexploitation will lower the productivity of ecosystems and the self-replenishing capacity of soil, water, and atmosphere. The stability of planetary processes will be at risk. Nature will be reduced and confined to hypermanaged ecological islands and megazoos. The eight thousand or so protected areas that currently cover 4 percent of the earth's surface form a vital biological storehouse, but even if their area were doubled, the storehouse would be unable to prevent mass extinctions. Habitat fragmentation, ecological isolation, edge effects, poaching, and other forces will greatly impoverish these isolated biological islands.

If nothing else, community-based conservation can help buffer protected areas from ecological impoverishment. A bigger opportunity by far lies in conserving and using the bulk of rural land productively and sustainably for its inhabitants, stemming the loss of biological wealth that necessitates protected areas (Western 1989).

The Uncertainties

We must avoid simple prescriptions and romantic illusions of returning to a less-complicated bucolic past in tackling community-based conservation. We must also avoid the pitfalls of integrated planning (IRD), in which overly ambitious goals and timetables and heavy dependence on outside expertise for specialist skills undercut indigenous administrative institutions (Lewis and Carter 1993).

Enormous obstacles block the potential for conservation in the rural landscape. The breakdown of traditional societies, population and commercial pressures, nepotism, corruption, and lack of awareness, knowledge, skills, and enforcement are only a few examples. Perhaps the greatest obstacle lies in the parochialism of communities and the difficulties they face in conceding the rights and interests of other communities.

Furthermore, no community today stands alone. In some cases, communities

share resources such as the Pacific salmon or the Serengeti wildebeest. Others find that common interests arise indirectly, for example, over the impact of deforestation on river flows. Every community now depends on outside markets and is therefore subject to the vagaries of pricing policies and marketing structures outside its control.

Community-based conservation, under these circumstances, is not simply a question of recognizing the rights of local communities and landowners to use resources. In the absence of a sense of responsibility to society and the appropriate management capacity, devolving to local communities the right to use resources carries the risk of even worse destruction.

Given the risks and uncertainties, can governments realistically abrogate their responsibilities to society in the interest of devolving proprietary rights to local communities and individuals? This raises the difficult question of which right is more fundamental: that of the community or that of society? Does this mean, then, that responsibilities and capabilities should be linked to rights to use and manage natural resources?

All three factors—rights, responsibilities, and capabilities—were once more or less internalized within traditional communities and imposed by resource limitations. The integrity and interrelatedness of these factors broke down once local communities entered a larger constellation of communities within nation states and, more recently, a global community of nations.

While community-based conservation and talk of the new conservation paradigm have engendered a rush of optimism, the troubling question of whether communities actually can resolve resource conflicts and slow environmental degradation better than a centralized authority remains (Wells and Brandon 1992). The scale and complexity of environmental problems is far greater today than anything traditional communities ever had to deal with. Even where cultural institutions are still intact, poverty, commerce, and politics play havoc with them.

The chapters that follow take a hard look at community-based conservation in order to shed light on its strengths and weaknesses. Parts I and II present case studies from around the world. Part III is concerned with the urgent themes that arise from the case studies. The chapters in Part IV present the conclusions of the Airlie House workshop and convey a sense of the common ground and differences that emerged from discussion among the diverse participants. The final chapter, "Visions of the Future: The New Focus of Conservation," speculates on the future of conservation in the rural landscape.

Sources

Berger, J., ed. 1979. *Indigenous Peoples: A Global Quest for Justice*. Report for the Independent Commission on International Humanitarian Issues. London: Zed Books.

Carson, R. 1963. *Silent Spring*. Boston, Massachusetts: Houghton-Mifflin.

Chambers, R. 1983. *Rural Development: Putting the Last First*. London: Longman.

Croll, E., and D. Parkin, eds. 1992. *Bush Base: Forest Farm, Culture, Environment and Development*. London:Routledge.

Durning, A. 1989. *Action at the Grassroots: Fighting Poverty and Environmental Decline*. Worldwatch Paper 88. Washington, D.C.: Worldwatch Institute.

Ehrlich, P. R., and A. H. Ehrlich. 1968. *The Population Bomb*. Maltituck, New York: Amereon.

Hellinger, S., D. Hellinger, and F. O'Regan. 1988. *Aid for Just Development: Report on the Future of Foreign Assistance*. Boulder, Colorado: Lynne Rienner.

Hirschmann, A. 1993. *Getting Ahead Collectively: Grassroots Experences in Latin America*. New York: Pergamon Press.

Holt, S. J., and L. M. Talbot. 1978. "New Principles for the Conservation of Wild Living Resources." Wildlife Monograph No. 59. Supplement to *Journal of Wildlife Management* 43(2):1–33.

International Union for the Conservation of Nature and Natural Resources, the United Nations Environment Program, and World Wildlife Fund (IUCN, UNEP, and WWF). 1980. *World Conservation Strategy*. Washington, D.C.: IUCN, UNEP, and WWF.

Kemf, E., ed. 1993. *The Law of the Mother*. San Francisco: Sierra Club Books.

Lewis, D., and N. Carter, eds. 1993. *Voices from Africa: Local Perspectives on Conservation*. Washington, D.C.: World Wildlife Fund.

Martin, P. S., and R. G. Klein, eds. 1984. *Quarternary Extinctions: A Prehistoric Revolution*. Tucson, Arizona: University of Arizona Press.

McNeely, J. A., and K. R. Miller, eds. 1984. *National Parks, Conservation, and Development. The Role of Protected Areas in Sustaining Society*. Washington, D.C.: Smithsonian Institution Press.

Miller, M. S., ed. 1993. *State of the Peoples: A Global Human Rights Report on Societies in Danger*. Boston: Beacon Press.

Nash, R. F. 1967. *Wilderness and the American Mind*. New Haven, Connecticut: Yale University Press.

———. 1989. *The Rights of Nature. A History of the Environmental Ethics*. Madison, Wisconsin: University of Wisconsin Press.

Olson, S. 1989. "Extinction on Islands: Man as a Catastrophe." In *Conservation for the Twenty-first Century,* eds. D. Western and M. Pearl, 50–53. New York: Oxford University Press.

Rodes, B., and R. Odell, compilers. 1992. *A Dictionary of Environmental Quotations*. New York: Simon and Schuster.

Runte, A. 1979. *National Parks: The American Experience*. Lincoln, Nebraska: University of Nebraska Press.

Shabecoff, P. 1993. *A Fierce Green Fire: The American Environmental Movement*. New York: Hill and Wang.

Southwick, C. H. 1976. *Ecology and the Quality of Our Environment*. Boston: Prindle, Weber and Schmidt.

Talbot, L. M. 1993. *Principles for Living Resource Conservation: Preliminary Report on Consultations*. Washington, D. C.: The Marine Mammal Commission.

Thomas, K. 1983. *Man and the Natural World: A History of the Modern Sensibility*. New York: Pantheon.

Tober, J. A. 1981. *Who Owns the Wildlife? A Political Economy of Conservation in Nineteenth Century America*. Westport, Connecticut: Greenwood Press.

Uphoff, N. 1985. "Fitting Projects to People." In *Putting People First,* ed. Michael Cernea, 359–395. New York: Oxford University Press.

Vedant, O. S. 1986. "Afforestation in India." *Ambio* 15(4):254–255.

Wells, M., and K. Brandon. 1992. *People and Parks: Linking Protected Areas with Local Communities.* Washington, D.C.: World Bank.

Western, D. 1984. "Conservation-based Rural Development." In *Sustaining Tomorrow: A Strategy for World Conservation and Development*, eds. F. R. Thibodeau and H. H. Field, 94–110. Hanover, New Hampshire: University Press of New England.

———. 1989. "Conservation Without Parks: Wildlife in the Rural Landscape." In *Conservation for the Twenty-first Century*, eds. D. Western and M. Pearl, 158–165. New York: Oxford University Press.

Wilkinson, C. F. 1992. *Crossing the Next Meridian: Land, Water, and the Future of the West*. Washington, D.C.: Island Press.

World Commission on Environment and Development (WCED). 1987. *Our Common Future.* New York: Oxford University Press.