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A Conservation Agenda in an Era of Poverty

[Ed. note: Steven E. Sanderson, president and chief executive officer of the Wildlife Conservation Society, delivered these remarks last October in a keynote address to the 2003 Biennial Scientific Conference on the Greater Yellowstone Ecosystem. The address has been published in *Yellowstone Science* (vol. 12, no.1, 2004, pp. 5–12), and will also appear in the conference proceedings, *Beyond the Arch: Community and Conservation in Greater Yellowstone and East Africa: Proceedings of the 7th Biennial Scientific Conference on the Greater Yellowstone Ecosystem,* A. Wondrak Biel, ed. (Yellowstone Center for Resources, 2004, pp. 276–284). We thank the author and the Yellowstone Center for Resources for permission to republish the address here.]

IT IS A DELIGHT TO BE INCLUDED IN THE AMBITIOUS AND IMPORTANT PROGRAM of this conference, in such a beautiful part of the world. I am not an expert in the specific subjects of this conference, but I do represent an organization that is devoted to the protection of great landscapes such as the Serengeti and Yellowstone systems, as well as the sustenance of the wildlife they support. I also grew up on the western slope of the Rockies in Colorado, and I lived my first 13 years in and around the Gunnison–Crested Butte area and in Montana during the late 1940s to 1960. During that time I experienced the transformation of Crested Butte from a sleepy mining and ranching community to one that boasted a tourist economy, and then ecotourism.

I should also add that the bison restoration in the West was sponsored by the New York Zoological Society, our founding organization, and began at the Bronx Zoo. My office is there, and directly across the great court is the historic Lion House where Theodore Roosevelt and William Hornaday, our founding director, created the American Bison Society to repopulate the American West with Bronx Zoo bison. Incidentally, the bison exhibit at the Bronx Zoo was one of the first naturalistic exhibits in any zoo in the world—a 20-acre prairie in a temperate woodland, which hosted the genetic bison stock that populated a lot of this country. So, when you see bison in Yellowstone or the Flathead country, you are looking at the descendants of proud New Yorkers.

I am filled with admiration for the principal speakers at this meeting, from whom I have learned so much. Dan Flores, Richard Leakey, Tony Sinclair, and Lee Talbot, as well as others on the program represent the very best in natural history, science, and conservation action. Whatever our individual strengths and weaknesses, our work together in coming years is extremely

important to the future of life on Earth.

My message to the conference is partly a pessimistic one. From the standpoint of conservation, which is at the intersection of science and public purpose, the temper of the times is not very good. The public commitment to conservation is a muddled one, and it has real implications for our work together as scientists, scholars, and public servants. In Johannesburg last year at the World Summit on Sustainable Development, the world appeared very publicly to walk away from the commitments it had made at the Earth Summit in Rio in 1992, and which had begun at the path-breaking summit in Stockholm in 1972. By the end of the Johannesburg Summit, conservation had been almost completely obliterated from the public consciousness of the multilateral system in favor of yet another rendition of sustainable development.

This year, the World Parks Congress in Durban, South Africa, was a troubling and difficult exercise, in which conservation was hardly invoked with pride. The chosen theme, "Benefits Beyond Boundaries," should have reiterated a commitment to extend the impact of protected areas to their surrounds. Instead, the discussion turned into a confused, rambling discussion that focused on the elimination of the hard edges of protected areas, which we have strived to create over decades of time, and which we should be proud to have achieved: 10% of the world's terrestrial surface under some kind of protection. Somehow, credible international conservationists who had worked hard to create those protected areas now positioned themselves more conservatively, to support a much more restricted notion of protected areas that would have "no net negative impact on local peoples"—without so much as a definition of what a "local people" was, much less what "no net negative impact" might mean. Conservationists know well that when there is a publicly contested question of the allocation of natural resources, stakeholders claiming to be local spring up all over the place, with varying degrees of legitimacy. So, for the conservation community to make such arbitrary and unspecified stipulations was disturbing. Additionally, some advocates for indigenous peoples argued—without so much as a word of opposition—that protected areas had been the worst thing ever to have happened to them. The Congress, apparently acquiescing to such categorical statements, conceded that protected areas had to be justified by economic and social criteria, not conservation or ecological integrity. There was very little mention of the achievements of the conservation community or its historic goals. And, in fact, there was a great deal of homage paid to the rural development community, despite the fact that the broad concepts of development offered in the post-World War II era have failed to prove their sustainability or their value to the truly poor.

These issues have been almost uncontested in the rush to promote poverty alleviation in the new millennium. The United Nations (UN) and the multilateral development community goals for the new millennium barely mention conservation. In fact, in the millennium development goals of the UN and the World Bank, sustainable resources with respect to human development have actually taken the place of conservation. The World Bank's new forestry sector policy has shifted from conservation to human poverty alleviation, after a decade of staying out of financing projects in tropical moist forests because the bank itself (along with its many critics) became concerned with the negative impact such projects might have on the all-too-rapid process of tropical deforestation. The argument for

returning to forestry sector loans appears to be that somehow, ten years later, the world knows enough about achieving sustainable forestry practices throughout the world. The evidence for this claim is missing.

The desire to relieve the world of extreme poverty is a laudable social goal. It is implicitly valuable to human life on Earth, and close to the hearts of those of us who work in developing countries, but also in the American South and West. Poverty is a difficult, degrading human condition that needs attention of the kind that the millennium development goals are paying. And it bears directly on who we are as conservationists. Conservation, like poverty, is a cultural concept, and our culture is concerned with human social progress. As the eminent conservationist Richard Leakey has said in his writing, he is not sure he would be so conservation-minded if he were hungry and cold.

However, something or some force in the global community has led the world to believe that conservation of protected areas should be responsible for bearing a great deal of the burden of economic development and local poverty alleviation in the world. How we came to that is a matter of great mystery, especially since the economic growth and development of much of the world has led to a protected areas system that is a tiny fraction of the terrestrial biosphere. The remainder, for better or worse, has been open to development and has been rapidly transformed in the last century, with increasing speed in the post-World War II period. Now, in Equatorial Africa and South and Southeast Asia, where much of the world's rural poverty is concentrated, plans for poverty alleviation depend on increasing agricultural productivity in existing land, using more energy and water, and intensifying livestock husbandry in fragile lands.

The goals of hunger alleviation require that such improvements must accrue to local peoples as well, but the history of agricultural productivity and the Green revolution during the post-World War II era do not inspire confidence. After all, in 2003, 75% of the world's poorest populations are in the countryside after 50 years of agricultural development. Even in the greater Yellowstone area, we can find evidence of local peoples being crowded out or hurt by what appear on the surface to be good ideas for development.

I believe this process around the world is the product of shortsighted economic development ideas, a continuing emphasis on sectoral economics in the face of decades of environmental failure, and a reading of past and future that is more convenient than true. In the American West, much of the so-called local protest against environmental restrictions actually is a stalking horse for large-scale energy, mining, agricultural, and more recently, tourist endeavors that often displace people to less attractive areas where they now staff the service sector for the rich interloper. The issues are posed as local, but they are often national (in the case of energy) or global and corporate, in the case of subsidies or mineral permits.

In any case, wild nature in our time has been converted into a contested area that is debated, not in terms of nature itself, but purely in terms of economic potential. It is my hope that our work together in the future will be controversial in the best sense, pushing flaccid and poorly argued concepts out of the way in favor of sharper ideas, good science, and plans for conservation. And the first way to do that is to ask how all this happened, and how current forces are arrayed, so that we assess how we act most appropriately. When one looks at the history of any natural system that is

human-impacted—and that certainly applies to the focus of this conference—one has to grant a big swath of ground to politically infused memory. History as we know it is quite often the political use of facts or phenomena in the past to create myths and opportunities for the future.

In the case of natural resource systems, quite often there is a direct political use of natural phenomena, so that a flood on the Mississippi River produces greater effort to engineer flood control. Likewise, in the aftermath of the degradation of the Everglades, the federal government and the state of Florida are investing billions of dollars to recreate the Everglades, restore it, and re-engineer it, and, in fact, re-plumb it. Whether in the Everglades or the Mississippi, history becomes the reinvention of failure as success.

Similarly, in the international community, rural development and human poverty alleviation are reinvented failures now parading as successes. The ostensibly new tools, mechanisms, and models for rural development in the world today go back to the 1940s and 1950s. The only thing that is missing is the intellectual leadership of the post-war economic development theorists, who really led the way to a new way of looking at human progress. Missing also is a serious self-conscious critique of the failures of rural development in our time. River basin development of the kind now in play in the Mekong River Basin is, in fact, similar to projects from the 1960s and 1970s that were emblems of environmental disaster. Integrated rural development projects, increased inputs, credit availability, and agricultural intensification, the integration of agriculture into commercial markets and livestock production—these are all old, old ideas, dogged by as much failure as success. The community-based development ideas bandied about today are not much different than those in practice in Vietnam under the French.

Turning to the landscapes under consideration in this meeting, wilderness and preservation in Yellowstone and Serengeti were invented concepts, invented for specific political purposes. In both places, wilderness and preservation were concepts that did not take into account aboriginal presence. And so they have been, as we have learned over the last hundred years, demonstrably false as explanations of the natural systems of the Rocky Mountain West and East Africa. There has also been a reinvention of the explanation for our current condition, in which the extirpation of wildlife in wild systems has been blamed on the poor. Maurice Hornocker will tell you that cougars were shot out of the American Southwest by 1925, and it was not by the poor.

But conversation today in the global community insists that poverty leads to degradation and species extinction. Conservation, as the argument goes, stands in the way of economic development and so must be pushed aside in favor of sustainability. Conservation has been reinvented not as a promise for the future, but an obstacle to economic success, and so instead of building on the 10% of global lands under some kind of protection, they and their protectors are indicted for keeping people out and keeping people poor. And in landscapes like Yellowstone or Serengeti, or the Mekong or Congo basins, there is proposed what Dan Flores has referred to as a leap from extractivism to ecotourism without the intervening steps. So that in the Congo Basin, one of the most demanding and difficult deliverables that the conservation community is charged with over the next dozen years is to transform what is essentially a logging economy into an ecotourist economy in which there

will be no disadvantage to the tropical forested countries of the Congo Basin and, in fact, there will be a clean, sustainable future based on European, American, and South African tourism.

The conservation community may welcome the opportunity to make this historic shift, but it requires a standard never demanded of other, less conservation-minded economic agents. To go from logging directly to ecotourism is extremely difficult, just as it was extremely difficult in Crested Butte, Colorado, to go from coal mining to ecotourism without asking about the income gap or the dislocation of local peoples. I can promise you, you cannot find many of the people who lived in Crested Butte when I was born living there today, and I don't mean just that they've all died. Their families are not there. And it was because of the income gap. Likewise, the residents of Aspen today are not those of past generations. To the extent they remain, they are dotted along the valley road to Glenwood Springs. And so on.

There is not a given socio-economic benefit to changing an economy from an extractive base to an ecotourist base. The potential conservation benefit is much clearer. If conservation actually does have to do with human landscapes as well as natural landscapes, someone has to develop viable, realistic human benefits from the economic changes being proposed. And it must be done "on the run," as an ersatz model of economic development with putative ecotourism carving up the landscape.

It is worth noting, too, that conservation has become derivative of human use because the public agencies charged with conservation are also charged with satisfying the public. Nowhere in this world is it harder to satisfy the public than in the United States. The public agencies charged with protecting national forests, public lands—the Forest Service, the Park Service, Bureau of Land Management, all of the public agencies—have to respond to what people want, as expressed through organized civil society and the political process. So, conservation goals become derivative of human use practices. Perhaps no better case exists than the ongoing controversy over winter use rules for snowmobiles in Yellowstone. Twenty years ago it was not an issue; but now, more than 100,000 people use Yellowstone Park in the winter every year. The impact of that use is a fundamental issue for Yellowstone and for the National Park Service.

Similarly, in the early 1990s a survey was conducted of visitors to Yellowstone. People asked to rank what they liked about Yellowstone mentioned most often walking outside, going to the visitor center, and shopping. One imagines that in 1872, there must have been something else on people's minds when Yellowstone was created. While one might approve or disapprove of the hierarchy of consumer demand, national parks cannot be divorced from public satisfaction. That fact is etched on the Roosevelt Arch. The Park Service is not charged with telling the American people what they should insist upon in the parks. But the consumer is a new stakeholder in protected areas, in a way that might not necessarily serve the interests of conservation.

This confusing and distressing place in the history of conservation has come to us thanks to a lack of leadership on all sides. By that I mean that no organization or political consensus has emerged to seize the agenda for conservation in these great landscapes in the way that there must be. In the absence of such convincing hegemonic leadership, society risks a catastrophic compromise in which no one would be satisfied, in which all of the belligerents would

butt heads for a period of time, and in which no public policy solutions would be stable.

In conservation today we may be witnessing a convergence of weakness on all sides, development, economic growth, and conservation—from the multilateral to the local political forces in conservation that pull at the complex issues under consideration at this conference and beyond. Wildlife biology is in a tragically weak position, though getting stronger. It is of enormous importance to conservation, but only about a half-century old. The monographic studies and continuous databases on wildlife rarely stretch beyond the life of an individual animal, eight to ten years, and some of the longest continuous observations are twenty years. That shallowness in chronological time means that wildlife biology does not have explanations for many of the long-term consequences of different conservation strategies.

Wildlife biology also suffers from the skepticism of public authority. Public authorities view science with a jaundiced eye. Sometimes science plays a positive role in helping define the terms of reference for a public ecosystem restoration. In the Everglades, National Park Service biologists and independent scientists are looking at snail kites and crocodilians, and the hydrologists at salinity and sheet flow, all of which contributes to the creation of models that will drive that restoration. Unfortunately, the role of science is circumscribed in the Everglades, too. When those models cross the political or public policy line, they are pretty readily kicked back across the line or discarded. For example, the restoration of a truly natural Everglades ecosystem by definition of the restoration plan cannot prejudice water availability or flood control for the populations of Floridians outside the Everglades boundaries. The restoration is delimited politically by the very human impacts that degraded the system in the first place. It is not censorship or bad faith, necessarily, but science with a complicated political value assigned to it is often unwelcome. Far better than the Everglades is the case of the Intergovernmental Panel on Climate Change, where despite the scientific consensus and the moderate tone of the panel, the political use of science in public discourse is problematic.

Beyond the uneven experience with domestic public authority, conservation biology does not articulate well with the multilateral development assistance community. Conservation does benefit in some ways from official development assistance, or multilateral development strategies. But it is not an exaggeration to say that conservation has little role in setting their institutional agendas. Conservationists understand little and have even less of a role in multilateral trade, structural adjustment, and international finance. We simply are not at the table.

Some of this arranged irrelevance is the fault of applied science itself, especially its truncated scope. Wildlife biology has been very confused historically about people. Protected areas have been demarcated without regard to local people. Indigenous peoples and frontier folk alike have been demeaned by some protectionist strategies or dislocated by well-meaning conservationists. In the United States and in pre-independence Africa, wilderness and preservation were concepts that were developed without regard to people.

Conservation science has little reputation in the social science community, which itself understands little about natural systems. Social science invests little in knowing anything about wildlife or wild lands. Social scientists tend to spend very short field stints and to fix economic or social

equilibrium rather than explore its dynamics. Social scientists in the academy—like their life science counterparts—have no management accountability, which conservation organizations and public agencies do. And they have generally failed to acknowledge or write up successfully the failures of rural development.

Public agencies are burdened by uneven levels of capacity and discretion, and extremely political environments in which to work. The multilateral community does not appear to have any accountability for the projects it supports. While criticism abounds, it is difficult to imagine a circumstance in which the multilateral development banking system will actually be held to account for its loans and project ideas. The same can be said of the World Trade Organization, the International Monetary Fund, and numberless regional development authorities. Combine that lack of accountability with the endless infatuation with hopeful rhetoric and a recipe for adventurous experiments is ready. One might readily include the quest to eliminate half of the world's poverty by the year 2015 in that category.

Non-governmental organizations, for their part, completely lack political legitimacy. However important the work of NGOs, they are always in the position of never having been elected or legitimated by any political process. NGOs are able to work only as long as they are convenient to those in power.

What is to be done? It is an important question, because conservationists have failed to produce a positive agenda that the world can accept and be enthusiastic about. Conservationists can cleave to their core mission by creating models of the kind that are being discussed at this conference, models that integrate human social variability into natural system models. That requires an integrative science that does not yet exist. It does not make sense to talk about the human side of the question separately from the natural side of the question, nor to hold meetings about conservation priorities without a joined social and natural science community.

The community that gathers around these questions has to work at multiple scales, to think about distal drivers, not just local drivers. That also means understanding globalization more seriously. Recently, Montana cattle prices spiked because of BSE [bovine spongiform encephalopathy] in Canada, and the embargo on the imports of cattle from Canada. Since that time, prices have reversed again, thanks to the appearance of BSE in the American West. Forces like that have impact on natural and social systems all the time. And yet conservation does not consider multiple scales for research. Yellowstone is not simply a park, but a linked landscape from the Elk Refuge all the way up into Canada.

In addition to working in an integrative fashion, conservationists must keep their boots muddy. Many organizations in this world do conservation by proclamation. Real conservation must be ground-truthed, and conservation actors must create a contingent model for conservation action as well as scientific observation along the lines of strong, adaptive management principles.

In the end, the community of conservation science, and the science of protected areas and these great landscapes, must cleave to the mission of conservation: the sustenance of wildlife and wildlands in changing human circumstances. As Clifford Geertz would say, that has to be "lit by the lamp of local knowledge." But it always has to refer back to larger objectives. This community I am addressing must be the best, but with a clear set of outcomes in mind. The positive alternative is a science

for conservation in small, out-of-the-way places that is associated with human betterment. It can be done, but it's not easy. Conservation can inspire people to care about wild nature, people who are alienated from wild nature in every facet of their modern life. Conservation can educate young people to science in an applied way that excites them, rather than in the classroom with principles of science. Conservation can create a positive concept of wildlife health, addressing everything from how prey densities may affect populations of lions in the Serengeti to the sources of chronic wasting disease in the American West.

Finally, conservation can represent two-track diplomacy, working in systems where it is very difficult to work politically. By linking science and community development to positive outcomes, conservation can create alternative pathways to formal diplomacy. Does the proclamation of Iran as part of the Axis of Evil make the conservation of the remaining populations of Persian cheetah less important?

Above all, conservation has to represent the integrity of mission, of conservation, knowledge creation, and stewardship, and a vision of a future in which people and nature can co-exist. That's a very bright promise, a very demanding agenda. But it's one that I believe all of us at this meeting share. It crosses from academic to applied organizations, and from private NGOs to public agencies like the National Park Service. I congratulate you on being a part of it, and look forward to your deliberations, which undoubtedly will help us all.

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