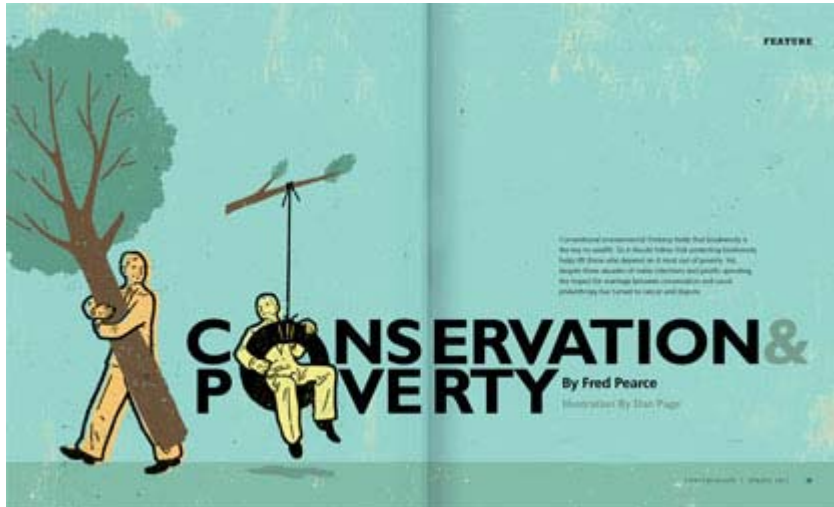


## Conservation and Poverty Reduction

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[1]

**By Fred Pearce**

Illustration By Dan Page

*The Batwa “pygmies” of central Africa lost many of their hunting lands with the creation of national parks in Uganda, Rwanda, and the Congo. Washed up at the side of the road and banned from their traditional lives, they seemed doomed. But now—at least if you believe the tourist literature—they are turning into entrepreneurs of forest tourism, taking well-heeled visitors on trails to find the region’s great apes. Is conservation at last working for them?*

*Meanwhile, in southern Mozambique—one of the world’s great biodiversity hotspots—American philanthropist Greg Carr is pouring his cash into a buffer zone of “green development” around the Gorongosa National Park. In “Africa’s Lost Eden,” CBS celebrated his contribution toward helping sustain people. But anthropologists accuse him of causing havoc, exacerbating complex land disputes, and disrupting local food systems with ignorant idealism—of creating poverty rather than alleviating it. Are they right?*

**Despite the promises** of conservationists that they can deliver green sustainable development, around the world extreme rural poverty continues to show a disturbing correlation with the richest biodiversity hotspots. Natural riches, however well protected, do not translate into better lives for the most vulnerable. Indeed, often those who live closest to nature seem to gain the least from its protection.

As forest-dwellers, herders, fishers, and hunters wait for the green dividend, their would-be supporters in the academic community are mired in dispute. Many social scientists have come out against rich conservation organizations, accusing them of grabbing natural resources from the poor and giving little in return. Moreover, some conservationists wonder whether they should retreat to a narrower definition of their task.

More disturbing, those who live in the hotspots feel betrayed by the failure of big promises. Nineteen years after the Rio Earth Summit—where community-based conservation and sustainable development became the mantra for a generation wanting to create a better, greener, and fairer world—we badly need to know what has gone wrong, why the benefits are proving so elusive.

Exactly what are the links between poverty and conservation? Is biodiversity really the key to economic advancement? Or could it be that dependence on biodiversity is what holds the rural poor back, keeping them poor?

**Poverty is a loaded term.** Perhaps our notions of sustainable development are weighted down with

romantic ideals about noble savages living off the land in harmony with nature. Some may like to believe that even the poorest rainforest dwellers are “rich,” thanks to the natural abundance all around them. They have no need of money, the argument goes. So any definition of poverty based on a daily wage is meaningless. In truth, a life too close to nature can often be nasty, brutish, and short.

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[2] Money may not be the right measure, but how about the United Nations Human Development Index? Sadly, it too shows that many of the world’s biodiversity hotspots are home to some of the most deprived of our species. That does not mean one causes the other; in part, both arise from low densities of human population. Low densities allow nature to thrive but also mean that people are isolated from the infrastructure and economic networks that generate wealth and sustain human services such as health care.

Yet even those conservationists with a more sophisticated analysis of the needs of humans still face a dilemma. If they try to offer some improved economic prospects for the poor, they run the risk of unleashing a cycle of environmental destruction that ultimately wrecks the biodiversity they are employed to protect. But if they don’t make that effort, they are accused of destroying the livelihoods of the world’s poorest and most vulnerable in order to protect wildlife.

Clearly, the links between poverty and conservation are more complicated and contradictory than a simple take on sustainable development might suppose. This makes it all the more surprising that there have been so few detailed studies into the links between poverty and conservation.

Environmentalists are belatedly waking up to this circumstance. A recent paper by researchers from two of the “big four” international conservation agencies—Bryan Curran of the Wildlife Conservation Society in New York and Louis Defo of the World Wildlife Fund—admitted that “to date there have been few long-term studies of the effectiveness of protected areas for biodiversity conservation, nor their impact on local societies.” (1)

Chris Sandbrook of Britain’s University of Cambridge, who recently completed a major study of the impact of well-funded ape conservation projects on poverty in Africa, reached the same conclusion. There is “a startling lack of data. Very few initiatives seem to measure and/or publish the impacts of their work for either conservation or poverty alleviation,” he says. (2) Why so? Do conservationists simply believe their own propaganda? Or are they afraid of what they might find?

At any rate, with billions of dollars spent over many decades on hundreds of biodiversity projects covering millions of hectares (many of which claimed to address poverty as well as conservation), it is an alarming admission. Surely Sandbrook is right: “This is a big problem that requires urgent attention.”

**In the absence of hard data** or independent research, the growing debate between natural and social scientists has been polarized and acrimonious. In one recent exchange, Kai Schmidt-Soltau, a Swiss social scientist at the International Network on Displacement and Resettlement in Tucson, Arizona, claimed that conservation organizations have willfully dispossessed “upwards of 120,000 conservation refugees [and] plan to resettle 170,000 more” in central Africa. Curran replied that “not a single individual has been physically removed from any of the protected areas created in central Africa over the past decade.” He accused Schmidt-Soltau and a “small but highly productive body of researchers” of publishing and repeating lies.

Partly, this is a dispute about definitions. Park creation today rarely involves outright forced evictions. But conservation’s critics now use the term to include those who move “voluntarily” or who lose access to natural resources as a result of conservation laws. For Curran, this is misleading. Schmidt-Soltau replies by accusing natural scientists of being “ignorant of the global discourse on involuntary resettlement” among social scientists. And he correctly notes that many international agencies include such social disturbances in their definitions of forced resettlement. One imagines the victims do, too.

But partly, it’s about politics—or, rather often, the desire of those wanting to improve the world to keep politics out of their argument.

Conservationists certainly want to “do good.” Their fundraising is built around simple appeals to protect nature and help poor people. They are at pains to distance themselves from local political controversies. But, says Bill Adams, a geographer from the University of Cambridge, in truth “both

biodiversity conservation and poverty alleviation are intensely political activities . . . both generate losers as well as winners and require trade-offs among the poor, between poor and rich, between local and global, North and South, current and future generations.”

Social scientists often criticize conservation NGOs for ignoring these realities in the belief that by ignoring them, greens become co-opted by people whose interests are to preserve the power of the powerful and to marginalize the poor. While professing political neutrality, they say, conservationists too willingly collaborate with national governments of sometimes dubious probity and cut deals with corporations for funding. NGOs make heavy use of corporate funding and co-opt business leaders onto their boards. The suspicion is that in return, greens quietly drop their opposition to big mining or agricultural projects.



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At the global level, natural resources are of course vital to human well-being, especially for the poorest. The U.N.–backed study on The Economics of Ecosystems and Biodiversity (TEEB) found that in India, 47 percent of the income of the poorest comes directly from natural ecosystems—a figure rising to 75 percent in Indonesia and 89 percent in the Brazilian Amazon.

A symposium on poverty and conservation held at the Zoological Society in London in mid-2010 agreed. However, it also found that “it is often the relatively low value or inferior goods and services from biodiversity that are most significant to the poor.” Resources of higher commercial value “attract the attention of the more affluent groups, often crowding out the poor.” That applies to bushmeat, forest fruits, timber, and even tourists. We should not be surprised, perhaps. But if conservationists

get co-opted by the powerful, it is hardly surprising that the poor lose out.

Ecotourism is often cited as a prime example of how the rural poor in biodiversity hotspots can gain cash from their natural environment. Sandbrook, in his study of who benefited from great ape conservation, found that great apes generate “very large amounts of money [but] the proportion shared by local communities is often too low to have any meaningful impact on poverty.” The poor could not even get jobs as guides to the ape grounds, because tourists wanted western scientists and English-speaking guides. Instead, those who shared the land with the apes and knew them most intimately were marginalized. Many lost out because “conservation enforcement” around the ape habitat “led to an increase in poverty.”

There are attempts to get around this. A recent initiative is the Batwa Cultural Trail, launched by the Uganda Wildlife Authority and the United Organisation for Batwa Development in Uganda. In one corner of their domain, these indigenous “pygmies” of central Africa have escaped being pauperized by conservation and instead have a stake in it, taking a slice of the income from tourists who come to see the Virunga Mountains of southwestern Uganda as a human habitat as well as a wildlife habitat. But the Batwa remain fearful of depending on fickle foreigners; in any case, only a few benefit from the trail.

The huge tourism industry around the game migrations on the Serengeti Plain in East Africa looks more promising for the poor. Tourism employs some 50,000 Tanzanians alone. Yet it tells a similar story, according to Manchester geographer Dan Brockington. The Maasai people, who owned the plain until much of it was taken over to create parks, see little of the large tourist revenues, which end up mostly in the hands of Nairobi-based entrepreneurs, the government parks service, or a new network of privately owned nature reserves. Even in areas where Maasai-owned land is leased by private conservancies, most of the revenues end up in the hands of a small, land-owning elite, while poorer pastoralists lose out, according to Claire Bedelian of University College, London.

The news isn’t all bad, however. Other studies suggest wildlife tourism often brings with it ancillary benefits for communities, such as roads, telecommunications, and healthcare facilities. An analysis of 27 tourism projects in Asia, carried out by the Overseas Development Institute in London, found that even though the rich benefited most from wildlife tourism, most of the population benefited to some extent. There was trickle-down. Casual laborers, trinket sellers, craftsmen, and local businesses all got something. Women did especially well.

[4]That's fine while the going is good, while the tourists come. But tourism is a bubble that can burst—as happened famously in recent years after terrorist outrages in Bali and civil disturbances in Kenya. Tourists can also trample the very travel destinations they wish to experience. And while tourists and the tour companies that bring them can move on to a new and fashionable destination, their hosts are left to clear up the mess.

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Probably the biggest review of research into poverty and conservation has been carried out by Craig Leisher of The Nature Conservancy. (3) He looked at over 400 reports and other documents in search of "mechanisms" that regularly delivered both biodiversity conservation and poverty reduction. Pickings for the poor were slim, he found. Only two of the ten mechanisms he assessed yielded a "high" benefit in attacking poverty. One was tourism. The poor might garner only a small share of what was on offer, he found, but even that small share could be important. The other mechanism was no-fish zones created to act as nurseries for fishing in neighboring areas. Coastal fishing is an egalitarian business, with low start-up costs and few barriers to entry. And Leisher found that communities were strengthened by coming together to manage a no-take zone from which they benefited.

But on land, he found only a few studies that could demonstrate any consistent synergies between conservation and poverty reduction. This applied even to those measures typically targeted at the poorest—such as marketing of non-timber forest products. These, Leisher concluded, "can prevent a decline into deeper poverty but rarely sustainably reduce local poverty."

This is a remarkable finding from a researcher employed by one of the largest organizations whose business it is to make conservation deliver sustainable development. The model, he was telling his bosses, does not work.

Leisher, like other researchers, pinpointed the importance of power and the ability of elites to capture value of resources that theoretically are owned communally. Natural resources in precious natural hotspots are generally not owned. Few forest dwellers have land rights; if they do, they have few methods of asserting them. So whether the business is mining gems or cutting rattan or milking latex, if the resources prove seriously profitable, they are quickly taken over by either elites within the communities or powerful outsiders. The poorest end up at best as indentured workers and at worst simply expelled. Environmental resources, like valuable minerals, can prove a "resource curse" for the poor.

Community-run forests may be an exception here. Today, more than a quarter of all forests in developing countries are legally owned by communities. And this assertion of ownership by the forest dwellers themselves might be doing more for conservation than all the work of all the outside environmental activists. Leisher found "considerable evidence" that community forestry, when it works well, both protects biodiversity and alleviates poverty.

In fact, community forestry seems to work better than conventional, publicly owned parks. In practice, these generally become the playthings of powerful outsiders. Poor locals rarely have the skills to get jobs as rangers, says Leisher. The poor often become the targets of rangers, criminalized for trying to harvest produce from their old hunting and gathering grounds.

**Politics and power relationships** may not be the only problems in making conservation work for poverty alleviation, however. Our understanding of nature and biodiversity has become confused as well. Natural resources, in the eyes of the rural poor and others who depend most on them, may look very different from what conservationists see. Here, we have to define better another word that has become totemic in the debate: biodiversity. Is talking about biodiversity the same as talking about nature?

Biodiversity may ultimately be the bedrock of ecosystems, but most of the time livelihoods

[5]The fecundity of the biosphere is not the same as biodiversity. Most conservation today is about preventing extinctions, often of a quite small subset of flagship endangered, endemic, or plain charismatic creatures. But it is biomass rather than biodiversity that matters most immediately for wealth generation. Biodiversity may

## depend on volume rather than variety.

ultimately be the bedrock of ecosystems, the backstop that prevents biomass breakdown. But most of the time, livelihoods depend on volume rather than variety—whether of timber or fish or game or fruit or rattan or any of the other fruits of the forests.

Leisher found that “what reduced poverty was not increased biodiversity but increased biomass—the amount harvested rather than the variety.” It was size that mattered. “To help a poor fisher out of poverty, the amount of fish he catches is far more important than the variety of fish he catches.”

**This is all very depressing.** But there may be hope. A modern variant of the traditional protected area is the conservation of specific “ecosystem services,” such as the capacity of intact forests to protect watersheds and store carbon. Here, the trick is to make direct cash payments to the residents of those ecosystems in return for their taking the lead in protection. In essence, such payments recognize that many of the economic benefits from nature arise not at the local scale but at the national or global level. So rather than assuming that this will trickle down to them, locals must be directly compensated for protecting the areas. In cash.

This approach can certainly work for conservation. One shining success is Costa Rica. The Central American country’s government now hands out payments for protection of ecosystems that cover one-tenth of the country. The payments go to forest communities and others for protecting watersheds—a critical resource for a small nation that depends on hydroelectricity for most of its power—and the forests themselves, which generate the large tourist revenues that fund the payments.

These payments are widely credited with being the key to making Costa Rica the only country in the developing world to have reversed deforestation. In the 1970s, it had the fastest deforestation rate in the world; by the mid-1980s, forest cover was down to 21 percent. It is now back above 50 percent, according to former environment minister Carlos Manuel-Rodríguez. Moreover, Costa Rica claims that payments for ecosystem services in some areas amount to 30 percent of household incomes.

Such payments are now widely touted as a major source for win-win solutions in the world’s surviving tropical forests. The big hope is that, as part of a future climate treaty, billions of dollars can be channeled to poor forest dwellers in return for protecting the carbon stored in their forests.

Be commodifying carbon, these Reduced Emissions from Deforestation and Forest Degradation (REDD) projects could unlock billions of dollars for forest conservation. But where will the money end up? Some fear little of it will reach the poor. Already, pilot projects are seeing most of the money going to consultants, governments, and a range of middlemen. The cost of consultancy services and other external expertise for a single pilot REDD project is typically around \$30 million, almost ten times that originally envisaged.

There is another problem. REDD is intended primarily to reward those who forego deforestation. It is intended to compensate for lost revenues. The premise is that if you aren’t currently destroying the forest, then logically you should not be compensated. As Sven Wunder, an economist at the World Bank-backed Center for International Forestry Research in Brazil, puts it: “The environmentally ideal service provider is, if not outright environmentally nasty, then at least potentially about to become so.”

There are other equity issues, says Wunder. While payments for ecosystem services require that all must participate in protecting the trees or watershed or whatever, it is far from clear that all will benefit equally. “Poverty can be made worse in cases where there is de facto forced participation, and the payments do not offset the losses from land-use changes.” REDD, then, seems to suffer the same problems as other initiatives aimed at combining conservation and poverty alleviation. In the end, the power relationships are usually too skewed for the poor to benefit unless their land rights are first assured.

It seems that in natural landscapes, as much as in man-made landscapes, the poor lack the power to access more than the most basic resources around them. And there must be a lingering suspicion, too, that biodiverse lands are often the last refuges for the oppressed, for exiles and refugees, and sometimes for those simply least able to make their way in the world. Just as cities have ghettos and “sink estates,” so may forests become “sink habitats” for humans. Looked at that way, their lingering poverty is less surprising than at first sight.

Should that absolve conservationists from responsibility for looking after their neighbors in the wilderness? Surely not. But it may mean they have to cede control of the land they want to conserve. Only then, perhaps, can the marriage between protecting nature and improving the lives of those

most dependent on nature survive and prosper. 6

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