

Economics and Conservation in the Tropics:  
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The Challenges of  
Promoting Broader  
Adoption of Direct  
Incentives for  
Conservation in  
Developing Countries

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## The Challenges of Promoting Broader Adoption of Direct Incentives for Conservation in Developing Countries

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One of the problems that has dogged the provision of natural amenities, such as the habitat needed to protect different species of plants and animals, is the absence of markets to give these resources value. This “missing market” for biodiversity conservation has led to a reluctance on the part of resource owners to forego destructive development and an overemphasis on destruction versus conservation (Ferraro and Kiss 2002; Niessen and Rice 2004).

In recent years, various schemes have been developed to address this issue, including land purchases and easements in developed countries and so-called sustainable use approaches in developing economies. In response to disappointing performance on the part of the latter, Conservation International and others have advanced a more direct alternative called conservation incentive agreements (Hardner and Rice 2002). Although this approach has some clear theoretical advantages and early pilots have shown much promise in the field, there are still a number of important obstacles facing its broader adoption. As discussed below, apart from the practical problems facing the implementation of any approach, conservation incentive agreements face obstacles stemming from two main sources: preconceptions questioning their general feasibility and relative cost-effectiveness, and a resultant gap in the kind of funding and organization needed to favor a more rapid and widespread adoption of additional projects.

### A More Direct Approach to Conservation in the Tropics

As the name implies, conservation incentive agreements are *agreements* negotiated with resource owners which define a concrete conservation outcome, such as the protection of a specific area, in exchange for benefits designed to give the resource owner an ongoing incentive for conservation. One of the advantages of this approach is that the benefits used as

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compensation are completely flexible, ranging from direct cash payments to in-kind services, such as education or healthcare, and can therefore be precisely tailored to the particular context.

The utility of this approach stems from the fact that conservation is simply not an attractive option for resource owners in many places that are conservation priorities, particularly in developing countries.

Although the conservation community has understood this reality for years most observers would agree that the standard approach to addressing this issue has at least a couple of limitations. First, it has usually not involved clear agreements about protecting well-defined areas but rather help in “jump starting”—via what are sometimes called “alternative livelihoods” or “integrated conservation and development projects”—some non-destructive or less-destructive activity in hopes that this would somehow lead to conservation. Examples of such projects include ecotourism, handicraft production, shade coffee, or even sustainable logging. The problem with promoting these activities when they do not involve clear agreements is that, without agreements, there is nothing for conservation investors to enforce or for beneficiaries to comply with in terms of achieving concrete conservation goals. Moreover, even if there were agreements, once initial investments in establishing these projects are made, there is no ongoing leverage to encourage compliance.

The second limitation of this approach is that the activities typically promoted in these kinds of projects invariably depend on markets that are either difficult to create or undependable, or—more often than not—both.

One of the great attractions of conservation incentive agreements is that they specifically address *each* of these two shortcomings by involving clear, enforceable agreements and reliable annual benefits that do not depend on unpredictable market forces.

### **Why Direct Incentives Have Not Been More Broadly Adopted to Date**

Although the number and diversity of conservation incentive agreements has grown steadily in recent years, there are a number of factors that nonetheless restrain their broader adoption. Among the more important are a set of preconceptions within the conservation and development community that question the basic feasibility and cost-effectiveness of the general approach.

There is, for example, a widespread belief that in developing countries protected area boundaries are essentially unenforceable. And, if enforcement does not work in parks, then it

will not work for incentive agreements either. In one of the few studies to examine the accuracy of this assumption, however, Bruner et al. (2001) found that parks in a broad range of countries across the tropics have been surprisingly effective in preventing encroachment, even under extremely challenging circumstances. A number of studies using satellite imagery have shown similar results. Our expectation is that incentive agreements should be at least as effective as parks, since they borrow what Bruner et al. and others have found to be the most important elements of park effectiveness (i.e., active enforcement and boundary demarcation), and add a concrete and contingent benefit to the rightful resource owner, making protection much more desirable and feasible than would otherwise be the case.

The issue of protection, however, is not the only reason that people might question the viability of direct incentives.

Another important issue is their perceived cost. Even if areas can be effectively protected, many would question whether paying landowners for habitat protection on an ongoing basis is a practical alternative. There are at least three reasons why this concern is misplaced (Nielsen and Rice 2006). First, in many cases, the opportunity costs of conservation—that is, what resource owners would need to forgo if they choose protection over development—is surprisingly low. Our experience is that total project costs, including monitoring and protection and the cost of the incentive provided typically range from US\$ 1–\$2/hectare per year. This relatively low amount is in part a reflection of the fact that many places identified as conservation priorities are not facing immediate threats from destructive development. Moreover, many areas that *do* face such threats are in the hands of resource owners who stand to gain very little in exchange for such development. Indeed, our experience has been that customary and indigenous landowners in particular often feel quite strongly about the *benefits* of maintaining their land intact, and would be wholeheartedly in favor of protection if only there were some way in which they could benefit in exchange.

Second, in addition to low opportunity costs, the global willingness to pay for biodiversity conservation is quite substantial (far more than US\$ 1 billion per year) and can only be expected to grow as the world's conservation resources become scarcer and more valuable over time (Hardner et al. 2000; GEF 2008). Finally, the view that other approaches are less expensive may in fact not be correct. In recent years, literally billions of dollars have been invested in sustainable use options, such as ecotourism, integrated conservation and development projects, and sustainable logging, with very little to show in terms of commensurate conservation results (Nielsen and Rice 2004).

Other issues that arise in discussions of why long-term incentive agreements might not be feasible include weak government enforcement capabilities and insecure land tenure.

As regards the first issue, a general lack of political will and weak government enforcement are certainly realities in many of the countries of importance to conservation. But, this is not necessarily an intractable impediment. Indeed, arguably the best way to deal with such an environment is to work to build the necessary political support for project implementation and to reduce the need for legal enforcement to an absolute minimum. In fact, we have found that surprisingly strong political support can be developed for conservation by providing stakeholders with concrete compensation instead of depriving them of access to needed resources. Likewise, the *need* for legal enforcement is much more important in the absence of clear agreements and tangible incentives that provide the kind of annual leverage needed to encourage compliance.

Finally, in many areas of the tropics, insecure land tenure is simply a fact of life, one which can certainly complicate efforts to enter into reliable, long-term agreements. Fortunately, the universe of areas in which this is *not* a serious problem is quite large, and working in these areas first offers the potential for significant gains to conservation. For example, there are tens of millions of hectares of customary and indigenous lands around the world that are park quality from a conservation perspective, but which are not, in fact, parks and never will be, but which are nonetheless excellent candidates for some kind of incentive agreement.

In sum, while all of these issues are important in specific locations, none would seem to be troublesome generally and, in many cases, they are not really problems at all. The belief that they are problems, however, is real and that, in turn, has had some significant ramifications.

### **Obstacles Facing Broader Adoption of Incentive Agreements**

One of the primary impacts of the objections noted above is that, if people do not feel that incentive agreements are possible, they are not likely to be organizing to enact them, which is richly reflected in the organizational structure of international conservation groups, as well as in the policies and priorities of the people that fund them. This, in fact, is the genesis of what we expect to be the main obstacles confronting efforts to expand the use of conservation incentive agreements in the future.

So, while there will no doubt be many obstacles encountered along the way, as this approach becomes more commonly used, two of the most important are likely to be issues related to what one might call funding and staffing.

Regarding the former, specific problems include the fact that money is not generally available to cover the recurrent costs of conservation. Instead, most available funding is for project-oriented initiatives to study the problem or to jump start a solution. In particular, it can be especially challenging to obtain funding to capitalize an endowment to cover the on-going costs of project implementation, even though this is perhaps the most obvious and direct approach to achieving project sustainability. It is worth noting in passing that this limitation applies equally to traditional protected areas, with similarly unfortunate results.

It is also very difficult to obtain funds quickly, to parry an emerging threat, or to capitalize on emerging opportunities, which greatly reduces the scope for using conservation agreements to compete effectively against destructive development.

Similarly, the current staffing of international conservation organizations largely reflects the type of activities that available funding will support. Accordingly, we suspect that even a cursory assessment would show that conservation groups are now generally much better staffed and organized to study the problem, establish priorities, and raise awareness than to identify investment opportunities, implement agreements, and monitor outcomes.<sup>1</sup> And, if so, this would obviously be a constraint on expanding the use of conservation incentive agreements.

Despite the problems noted above, our basic outlook on the future of conservation incentive agreements is decidedly optimistic. The lack of tangible market value for environmental goods and services remains one of the most serious threats to the world's dwindling stocks of biodiversity. Direct incentives in the form of payments in exchange for conservation offer the most promising means to address this missing market. As more on-the-ground examples emerge, we feel certain that the relative effectiveness of this approach will speak for itself and that ultimately both the conservation and funding communities will organize to take much fuller advantage of the opportunities that conservation incentive agreements have to offer.

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<sup>1</sup> A notable exception to this would be the Gordon and Betty Moore Foundation-supported Global Conservation Fund, which focuses exclusively on providing long-term funding for new protected areas, including those established using conservation incentive agreements.

## References

- Brune, A.G., R.E. Gullison, R.E. Rice, and G.A.B da Fonseca. 2001. "Effectiveness of Parks in Protecting Tropical Biodiversity," *Science* 291: 125–28.
- Ferraro, P. J., and A. Kiss. 2002. "Direct Payments to Preserve Biodiversity," *Science* 298: 1718–19.
- GEF (Global Environment Facility). Website. "GEF Funding."  
<http://www.gefweb.org/interior.aspx?id=44>
- Hardner, J.J, P. Frumhoff, and D. Geotze. 2000. "Prospects for Mitigating Carbon, Conserving Biodiversity, and Promoting Socioeconomic Development through the Clean Development Mechanism," *Mitigation and Adaptation Strategies for Global Change* 5: 61–80.
- Hardner, J.J., and R.E. Rice. 2002. "Rethinking Green Consumerism," *Scientific American* 287 (May): 89–95.
- Nielsen, E., and R. Rice. 2006. "Conservation Incentive Agreements as an Alternative to Tropical Forest Exploitation." In *Emerging Threats to Tropical Forests*, edited by W.F. Laurance and C.A. Peres, chap. 24. Chicago: University of Chicago Press..
- Nielsen, E., S. Ratay, and R. Rice. 2004. "Achieving Biodiversity Conservation Using Conservation Concessions to Substitute or Complement Agroforestry." In *Agroforestry and Biodiversity Conservation in Tropical Landscapes*, edited by G. Schroth, G. Fonseca, C. Harvey, C. Gascon, H. Vasconcelos, and A. Izac., 135–150. Washington, DC: Island Press.

## Recommended Reading

- Nielsen, E., and R. Rice. 2006. "Conservation Incentive Agreements as an Alternative to Tropical Forest Exploitation." In *Emerging Threats to Tropical Forests*, edited by W.F. Laurance and C.A. Peres, chap. 24. Chicago: University of Chicago Press..
- Ferraro, P. J., and A. Kiss. 2002. "Direct Payments to Preserve Biodiversity," *Science* 298(November 29): 1718–19.
- Hardner, J.J., and R.E. Rice. 2002. "Rethinking Green Consumerism," *Scientific American* 287(May): 89–95.