

## Using Economic and Regulatory Incentives to Restore Endangered Species: Lessons Learned from Three New Programs

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In the United States, the primary threat to wildlife is habitat destruction. And since much of the land occupied by endangered species is privately owned, the long-term survival of many endangered species depends on our ability to increase their populations by convincing landowners to restore degraded habitats. For this reason, a growing number of conservationists and policy analysts are advocating economic and regulatory incentives as a means to promote wildlife conservation.

In a newly published paper entitled, “Using Economic and Regulatory Incentives to Restore Endangered Species: Lessons Learned from Three New Programs,” by David Wilcove, a professor of ecology, evolutionary biology, and public affairs at Princeton University’s Woodrow Wilson School of Public Affairs, and Joon Lee, a student at Princeton University, the authors studied three new incentive-based programs for restoring endangered species on private lands in the United States: safe harbor, Environmental Defense’s Landowner Conservation Assistance Program, and conservation banking.

In their study, Wilcove and Lee found that incentive-based programs for restoring endangered species have been remarkably successful, based on the number of participating landowners, the number of species targeted for assistance, and the total amount of acreage involved. For example, by the summer of 2002, nearly 2 million acres of privately owned land had been enrolled in the U.S. Fish and Wildlife Service’s safe harbor program, which enables landowners to restore habitats for endangered species without incurring new regulatory burdens.

### Study Description

Nothing in the U.S. Endangered Species Act (ESA) or other federal statutes obligates landowners to participate in habitat restoration programs. The strength of the ESA lies in its ability to prevent government agencies or private individuals from inflicting further harm on a species once it has been declared endangered or threatened. It does not require private citizens to undo past deeds for the sake of recovery. Indeed, fear of the ESA may compel some people to prevent endangered species from occupying their property by proactively destroying unoccupied habitats—an approach dubbed the “scorched earth” technique by the National Association of Homebuilders.

Against this backdrop, Wilcove and Lee studied whether economic and regulatory incentives may be a way to reduce the fears of landowners, and thereby enlist their cooperation in endangered-species restoration programs. The authors reviewed three relatively new, incentive-based programs designed to do just that. These programs—safe harbor, Environmental Defense’s Landowner Conservation Assistance Program (LCAP), and conservation banking—represent a gradient of increasing rewards for cooperating landowners. Safe harbor removes current regulatory disincentives to habitat restoration; the LCAP reduces the cost of restoration; and mitigation banking can result in financial gain for the landowner.

In the paper, Wilcove and Lee analyzed the track record to date of each program and provide some general lessons on private-lands conservation based on interviews with conservation practitioners, and their own observations.

### Description of the Programs

#### **Safe Harbor**

A safe harbor agreement is a binding agreement between a landowner and the U.S. Fish and Wildlife Service (FWS). The landowner promises to undertake conservation measures to benefit an endangered species, and FWS in turn grants the landowner permission to undo those actions at a later date if the landowner so desires. Thus, the safe harbor agreement prevents the landowner from incurring the additional regulatory burdens associated with successfully restoring or enhancing the habitat of an endangered species. The agreement does not diminish protection for endangered species already occupying the property in question.

#### **Landowner Conservation Assistance Program (LCAP)**

A growing number of U.S. federal and state agencies, such as the U.S. Department of Agriculture’s Conservation Reserve Program, FWS’s Wildlife Habitat Improvement Program, and the Texas Parks and Wildlife Department’s Landowners’ Incentive Program, have turned to cost-share programs as a means of encouraging the restoration of wildlife habitat on private lands. NGOs also participate: for example, Environmental Defense, a private, not-for-profit environmental advocacy organization, launched its

LCAP in the Texas Hill Country in 1999. This LCAP is essentially a private conservation-leasing project originally designed to benefit two endangered songbirds, the Golden-cheeked Warbler (*Dendroica chrysoparia*) and the Black-capped Vireo (*Vireo atricapillus*). (It has since expanded to include other endangered species.)

The program has three components. First, Environmental Defense contacts landowners and conducts free, confidential surveys of their land to determine baseline populations of warblers and vireos and the potential to improve habitat conditions for the birds. Much of this work is done by a private wildlife consultant under contract to the organization. Environmental Defense and the consultant then prepare a habitat restoration and management plan tailored to the needs of the individual landowner at no cost to the landowner. Second, Environmental Defense covers some of the costs associated with the habitat restoration itself (typically prescribed fire and the planting of desirable tree species). Third, with the permission of the FWS, Environmental Defense administers a safe harbor program that covers participating landowners. Thus, LCAP goes beyond a standard safe harbor program by providing technical and financial assistance to the landowner, in addition to regulatory relief

### Conservation Banking

The ESA obligates landowners who wish to develop habitat occupied by an endangered species to “minimize and mitigate” the impacts of those activities on the species in question. Such mitigation often takes the form of the landowner purchasing habitat elsewhere and conveying it to a conservation entity such as the FWS or The Nature Conservancy. Under a banking scheme, landowners who must mitigate activities harmful to an endangered species are allowed to purchase credits from other landowners (bankers) who have either conserved or restored strategically located habitat for the species in question. If the sale price of a credit is sufficiently high, bankers have an economic incentive to purchase or restore habitats for endangered species. Developers, in turn, are spared the trouble and expense of developing and executing their own mitigation plans.

### Study Findings

Since the first safe harbor program began in 1995, there has been a sharp, steady increase in the number of participating landowners, the number of species included in safe harbor programs, and the number of acres of privately-owned land enrolled in those programs. As of July 2002, 189 landowners had enrolled nearly 2 million acres of land and were restoring habitats for 21 endangered species (3 mammals, 11 birds, 2 amphibians, 4 fish, and 1 insect). Participating landowners include a monastery, a community college, ranchers, homeowners, golf courses, timber companies, and state agencies. Some of these participants have received financial assistance for habitat restoration from federal, state, or private entities, but others have fully assumed the restoration costs. No landowner has withdrawn from the program or exercised the right to alter the restored habitats.

Environmental Defense’s LCAP has proved remarkably popular in the Texas Hill Country, a region where hostility to federal regulations is legendary. Landowner enrollment as of July 2002 exceeded 61,000 acres, involving 33 individual landowners. The total number of acres enrolled per year has grown dramatically over the past three years, in

part because the average size of an enrolled parcel jumped from 2,682 acres in 1999 to 4,507 acres in 2002.

With respect to conservation banking, results can be measured in two contexts: biological, defined as success in maintaining or restoring endangered species on bank lands, and economic, defined as success in selling credits (at a profitable price) to developers. These two measurements are related in the sense that banks cannot sell credits unless they have successfully purchased or restored habitat for the species in question. Thus, it is noteworthy that at least 23 banks have sold credits to date. The authors could not obtain data on the prices paid per credit or the profitability of the banks.

The authors were struck by two seemingly contradictory findings. On the one hand, the rapid growth in the safe harbor program nationwide suggests that many landowners are willing to assist endangered species if doing so does not carry the risk of added regulatory burdens. On the other hand, the fact that relatively few of the landowners enrolled in the LCAP in Texas have asked to be covered by a safe harbor permit suggests that many landowners do not fear the regulatory consequences of attracting endangered species to their property. Their eager participation in the LCAP indicates that a lack of technical information and/or financial support, rather than a fear of regulations, has prevented them from participating in endangered species recovery efforts until now.

### Policy Recommendations

Given the finite resources available for conservation, not all endangered species are suitable candidates for incentives programs that focus on habitat restoration. Reviewing the species that have benefited from safe harbor and the LCAP thus far, Wilcove and Lee identified three conditions that increase the likelihood of success.

First, the habitat requirements of the species in question must be reasonably well known. Second, the habitat itself must be restorable without excessive cost or effort. And third, the habitat must be restorable relatively quickly. This last condition is particularly relevant to safe harbor agreements because the participating landowner is not obligated to protect the restored habitat permanently, yet FWS must be satisfied that even temporary protection will result in a net benefit to the species.

Finally, the authors urge the FWS to create a centralized database in which records of safe harbor agreements, conservation banks, and other key programs and decisions pertaining to endangered species are stored and made available to the public.

A copy of the policy brief can be found at:  
[http://www.wws.princeton.edu/policybriefs/wilcove\\_incentives.pdf](http://www.wws.princeton.edu/policybriefs/wilcove_incentives.pdf)

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