WHY ENVIRONMENTALISM NEEDS HIGH FINANCE

Conservationists may wish money were no object, but if nature is to survive, economic incentives and biological imperatives must align.

BY C. JOSH DONLAN, JAMES MANDEL, AND CHRIS WILCOX
The value of life has always been a sticky subject. For millennia, species had value only if we had a use for them, be it for transport or food. Today that largely remains the case: We are concerned with the welfare of a few, while driving others to extinction and generally ignoring most of the organisms that collectively make up our natural heritage. What efforts we have made to protect that great majority of life hasn’t necessarily benefited the natural world, or people, very much at all.

Environmental conservation efforts have long been predicated on moral value and goodwill alone, but with the advent in recent decades of environmental legislation, such as the Endangered Species Act in the US, the moral imperative to preserve species gox legal heft. Unfortunately, such legislation has dodged perhaps the most powerful value of all: economic. Prior to becoming endangered, a species has little value, and consequently is of low priority to society. Yet once a species becomes endangered, it takes on a nearly infinite value: It must be protected at any expense, and the costs of protection borne by society are ignored. The result is a mess: Millions of dollars are spent on lawsuits. Citizens’ livelihoods are negatively affected by species protection; many people embrace a “shoot, shovel, and shut up” attitude that results in the swift eradication of a threatened species as a means of avoiding government interference with economic activity. And even if that doesn’t happen, a rescue of a species involves large sums spent on reactive, last-minute actions to recover a species on the brink of extinction. From spotted owls to wolves to red-cockaded woodpeckers, the story is the same.

Those problems could be averted if species had a value that was neither zero nor infinity, and if there were incentives for people to engage in environmental stewardship before a species becomes endangered. Conservationists must develop means to appeal to the economic interests of individuals, communities, and corporations, to encourage those groups to incorporate the environment into their decision making. If not, conservationists’ efforts to protect nature will continue to fail more often than they succeed. We believe that several market-based plans hold the most potential.

At the moment, dozens of solar-power companies are petitioning the US government for permission to build power plants on government-owned desert that is also home to the endangered desert tortoise. At present, protecting the tortoise is entirely the government’s responsibility. A species market could provide a financial mechanism for transferring extinction risk from Washington, DC, to the marketplace, while ensuring that stakeholders would profit when a species prospers. The key is to assign an appropriate and tradable value to a species. Imagine for a moment a species “swap” for the desert tortoise. A solar-power company that receives a permit to build on government land would make annual fixed payments to the government (or a private party) based on the number of tortoises present at the time the permit is issued. The government would in turn make annual payments to the solar-power company based on the number of tortoises present at the end of each following year. If the tortoise population has declined below the initial level, the solar company makes a payment to the government, which could use the money for tortoise-protection efforts elsewhere. If the tortoise population has increased, the government would make a payment to the solar company. Under this plan, the interests of the government and the company are aligned because both share the risk—and can enjoy the benefits—of maintaining a species’ health, and the solar company can justify tortoise mitigation to their shareholders as directly beneficial to the bottom line.

We can also use market mechanisms to transfer the actual value of environmental assets to stakeholders in a local community. In low-income countries, efforts to protect the environment often ignore the needs of local people, and efforts to alleviate poverty can produce incentives to degrade the environment. Pristine land is often a low-income community’s most valuable asset, yet they tend to lack access to the conservation value of those resources. Responsiblely capitalizing those resources while explicitly linking the capitalization to environmental stewardship could embed a sustained conservation incentive within communities. Some groups have focused on spending—so-called biodiversity payments—to protect the environment in such situations. We believe that a focus on lending is the best approach.

Decades of successful microfinance programs demonstrate that it is possible to improve livelihoods through debt investment based on environmental mortgages—loans that are collateralized by an environmental asset. Direct payments for biodiversity protection may seem more straightforward, but such equity payments come with challenges. Cash does not necessarily translate into improved standard of living, particularly in places that lack markets where cash can be spent.
And large cash payments often create social dissonance. In contrast, microfinance focuses on empowering people by providing them with the access to capital, markets, and services such as savings accounts and entrepreneurial training that are foundations in overcoming poverty.

Consider the following scenario—a realistic one. A low-income village in the tropical Pacific has rights to a nearby coral reef, which the villagers utilize as fishing grounds. The village’s main source of revenue comes from fishing, yet the fishermen have to travel long distances to sell their catch. While the construction of a nearby marketplace along the main road near the village would provide the necessary market access and increase profits, the village lacks both the collateral and access to capital to build a market. A community loan collateralized by a coral reef reserve would simultaneously deliver improved livelihoods and environmental gains. The line of credit available to the village would be directly tied to the size of unfished, pristine coral reef that is deemed a reserve, which would encourage conservation behaviors. Access to capital would shrink if the coral reef does; otherwise, the credit is around for the long haul.

An additional benefit to using debt investment is that it is more cost-effective than charitable equity investment. Policymakers and philanthropists struggle to balance economic activity with the creation of incentives for responsible behavior toward our environment. We believe that moving closer to private-sector, noncharity models is likely to result in stronger incentives for recipients to protect the environment, and would—thanks to repayment of loans—increase returns on environmental investments.

Different conditions, and thus solutions, prevail in the developed world. The Hawaiian swordfish industry, for example, is heavily regulated by the US government, which seeks to protect sea turtles, which the fishermen occasionally catch by accident. The US requires that fishermen have observers onboard to ensure they are doing everything possible to avoid sea-turtle bycatch, as well as to track the number of turtles caught. Each year the government sets a limit on the number of sea turtles that the Hawaiian fleet can catch; if that number is reached, the fishermen are sent home for the season. A few years ago this happened, and the fishermen lost millions of dollars in forgone swordfish. Superficially, this appears beneficial for sea turtles, yet the opposite is true. When the regulated and environmentally responsible Hawaiian fleet went home, unregulated fishing fleets from other nations swooped in: The most environmentally responsible fishermen were penalized, and more sea turtles died.

A policy framework that included biodiversity offsets would result in more effective conservation. Biodiversity offsets rest on the premise that there is more than one way to save a sea turtle. Under an offset program, once a responsible fishing fleet reached its sea-turtle limit, they could remain at sea, but they wouldn’t be off the hook. Rather, they would be required to fund measurable conservation interventions elsewhere, such as programs that reduce sea-turtle bycatch in other fisheries or that protect sea-turtle nesting beaches. In some cases, those offset opportunities would be many times more cost-effective than a fishery closure for all parties involved. Fishermen would still have an incentive to avoid catching sea turtles, but instead of a sunk cost—borne by everyone, as the fishermen lose income and the government trade and tax revenue—the cost would contribute to the recovery of sea-turtle populations.

Historically, conservation approaches have been either top-down or bottom-up; the former have employed only sticks, and the latter only carrots. Carrots without sticks breed no accountability, while sticks without carrots discourage innovation and result in bad attitudes toward the environment. The three mechanisms we’ve proposed—biodiversity derivatives, environmental mortgages, and biodiversity offsets—are meant to create incentive-structures with carrots and sticks. They are also meant to be cost-effective. The key to their success lies in careful research, appropriate implementation, and diligent regulation. There are many reasons to be uncomfortable with tortoise swaps and turtle offsets, but to claim, as our critics have, that nature is not a commodity to be bought and sold, is not one. To those who recoil from innovative financial tools being employed to encourage conservation, we can only remind them of what business as usual means for our natural heritage: overuse, exploitation, and extinction. —C. Josh Donlan is the director of Advanced Conservation Strategies (advancedconservation.org) and a visiting fellow at Cornell University. James Mandel is completing his doctorate in ecology and evolutionary biology at Cornell and will be joining McKinsey & Co. thereafter. Chris Wilcox is a scientist in marine and atmospheric research at CSIRO, the Australian national research organization.