

ADVANCED CONSERVATION STRATEGIES

Opportunities for Debt Investment in Environmental Conservation

Protecting and Restoring Biodiversity while Promoting Sustainable Livelihoods with Environmental Mortgages

Often in low-income nations, efforts to alleviate poverty produce incentives to degrade the local environment, and similarly efforts to protect the environment can result in no improvement in livelihoods. Indirect approaches to environmental protection include support for alternative livelihoods that reduce the use of local natural resources, such as non-timber forest product production, sustainable agriculture, or eco-tourism. Such livelihood approaches have been common over the past decades, and have largely failed to protect biodiversity and ecosystems to the extent needed. Incentive payment approaches have been recently advocated and explored; these include payment for ecosystem services, restricted land easements, and direct performance-based payments for biodiversity. The latter, such as paying directly for nesting tree kangaroos or breeding bird success, is the most direct and cost-effective way to protect an environmental asset.

Incentive payments, however, are not livelihoods. Rather, they are short-term payments (e.g., annual) that rely on a long-term funding stream, which could result in ephemeral incentives. A lump or one-time payment does not guarantee a lasting incentive for protection of an environmental asset. Direct payment schemes can also be complicated by other factors. Ethical issues can arise due to difference in purchasing power between the “buyer” and “seller”. Further, international or national laws can complicate or prohibit direct payment schemes. Lastly, there is no clear link between direct conservation payments and sustainable development, the latter inextricably linked to poverty

alleviation. An alternative approach is one that uses debt as a finance mechanism, linking investments in low-impact livelihoods with paying for biodiversity directly.

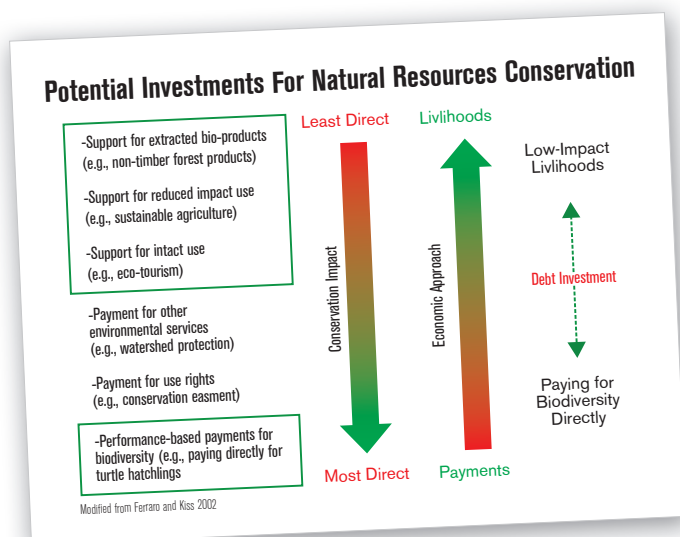
The Concept

By combining microfinance lending approaches with performance-based payments for conservation of environmental assets, long-term incentives for environmental conservation and sustainable economic development can be coupled. Using solidarity lending principles, a community could provide an environmental asset as collateral for a loan. A line of credit, which is tied to the state of the asset, is extended to the community members. In contrast to non-collateral loans (the average non-collateral microfinance loan rate: 22%), the environmental mortgage could carry a reduced interest rate, while still helping to cover transaction costs, audits of the asset, wrap-around services, and depreciation of capital. The line of credit could be managed by a trust embedded in the community at a local or regional level, balancing external oversight with community engagement and ownership of the process.

An Avoided Deforestation Example

There exists a fundamental gap between the value high-income nations place on pristine tracts of land in low-income nations, and the value that the owners of that land place on it, driven in part by the necessities of economic activity. Currently transfer of these values is difficult. For instance, because of regulatory and bureaucratic hurdles, as well as social equity and land rights issues, funds available in low-income nations from carbon offsets often cannot be spent efficiently on land conservation, which is the most effective mitigation strategy. Loss of any environmental asset has both local and global impacts: deforestation results in increased nutrient inputs to waterways and in reduced carbon sequestration and biodiversity. For example, the draining and deforestation of peat swamps in Asia accounts for approximately 8% of global carbon emissions annually. Given the low economic value of those lands, protecting them is a strategic way to reduce carbon emissions globally. Thus, investment in preserving standing forests and peat bogs in low-income countries can deliver local economic and environmental benefits, as well as monetary and non-monetary dividends to other nations.

In low-income nations where communities are clearing peat bogs or forests to expand agricultural practices, a conservation lending trust could be established. Community members could qualify for low interest lines of credit, with the total credit available directly linked to the environmental asset: standing hectares of pristine peat bog. The asset would be independently audited annually, and the terms of the loan would be revised accordingly, including loan termination if necessary. The loans could be used



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for a range of pre-approved ventures, from improved agricultural production on existing cultivated lands to alternative economic activities to educational programs.

An Endangered Species Example

Migratory species like loggerhead and leatherback sea turtles suffer from a suite of human impacts, including harvest of eggs and adults on nesting beaches across many Pacific island nations and mortality from industrial fishing on the high seas. These species are at a critical point, it has been estimated that loggerhead turtles may be extinct in 50 years. Some governments have taken steps to minimize impacts on marine turtles by limiting coastal development and regulating fisheries, at some cost to the public and private sectors. However, the efficacy of these conservation actions may be compromised by other activities like the direct harvest of eggs and adults for subsistence and sale in markets in other countries, particularly where there are few alternative sources of income in coastal communities. Investment in endangered species recovery in low-income countries can deliver local benefits, such as increased opportunities for sustainable harvest, nature-based tourism or other non-turtle related economic activities, as well as monetary and non-monetary dividends back to governments.

In addressing this issue in countries where direct regulation of unsustainable activities is likely to be ineffective, the primary question is how to break the link between the lack of alternative livelihoods and the unsustainable resource use that results from it. In low-income nations where communities are unsustainably harvesting sea turtle eggs, one possibility would be to establish a conservation lending trust. Community members could qualify for low interest lines of credit, with the total credit available directly linked to the condition of an environmental asset which is used for collateral: for instance, the annual number of sea turtle hatchlings leaving a local beach. The asset would be independently audited annually, and the credit available from the trust would be revised accordingly, including loan termination if necessary. The loans could be used for a range of ventures, vetted on an ongoing basis or structured as a pre-approved set, ranging from increasing market access via transportation infrastructure to alternative economic activities to educational programs.

There are a number of potential advantages with using debt investment as a tool for environmental conservation. While assessments and audits of the asset will be required, an independent third-party can oversee those processes, which would minimize governmental involvement. Since there is no transfer of legal or de-facto ownership, the approach avoids equity issues that are associated with direct purchases of assets or access rights. The establishment of an ongoing lending program also creates lasting incentives for stewardship, since current and future participants have repeat access to the credit as long as



the asset is maintained. Because the program is aimed directly at improving livelihoods and lending can be targeted at reducing unsustainable resource use, an environmental mortgage program could directly address the alleviation of poverty. Conservation payments, in contrast, can be seen as an entitlement and not necessarily result in improved livelihoods. Finally, environmental mortgage programs could potentially be incorporated into existing microfinance infrastructure, which would reduce overhead and transaction costs. Carbon financing that would result from either avoided deforestation or reforestation could be used to help cover transaction costs, and potentially to provide additional direct benefits to the lender.

Given the success of microfinance institutions on poverty alleviation over the past two decades, environmental mortgages are a promising approach in linking sustainable development and environmental conservation. Today, environmental assets are often valued solely for their extractive uses, and often that extraction is unsustainable due to a lack of alternatives. If challenges in design and implementation can be overcome, environmental mortgages could provide monetary values for the conservation of environmental assets, and provide not only the incentive but also the means for low-impact livelihoods and economic development.

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