



PAYMENTS FOR BIODIVERSITY CONSERVATION

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Defining biodiversity

Biodiversity is often associated with the variety of life forms in an area (species diversity). However, most ecologists consider biodiversity to consist of not only species diversity but also “*the ecological roles that different species play and the genetic diversity they contain.*” The Convention on Biological Diversity (CBD) goes further and defines biodiversity as “*...the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species, and of ecosystems.*”

Limitations of conventional approaches to conservation

Historically, governments have arranged for biodiversity protection through direct ownership of natural resources (national parks and other protected areas), regulation of private resource use (banning use of or restricting trade in endangered species), and provision of economic incentives (taxes and subsidies). Similarly, some large international donors have spearheaded conservation efforts through land acquisitions and by implementing various conservation projects.

These approaches, however, have had insufficient success. First, there is now a wide-ranging social and political opposition to land acquisition schemes in many developing countries. Also, resource managers now realize that protecting a small number of fragmented areas will not work in the long run. Instead, they need to promote conservation of entire landscapes and ecosystems. This requires voluntary adoption of appropriate land uses that are compatible with local biodiversity. Too many interventions have given only indirect incentives to local communities to adopt these land use practices. Therefore, PES offers a new paradigm to resource managers and organizations that aim to preserve Earth’s biodiversity.

Payments for biodiversity services

PES schemes provide direct and conditional incentives to land users to adopt biodiversity-friendly practices. For instance, under the Regional Integrated Silvopastoral Ecosystem Management Project, supported by the Global Environment Facility, local farmers across three sites in Colombia, Costa Rica, and Nicaragua receive regular payments for adopting silvopasture practices that generate biodiversity

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services. In recent years, such schemes have been taken up in several other countries. Payments for these schemes come from private corporations, international NGOs, research institutes, governments, even private individuals.

The push for such payment schemes comes not only from increased recognition of the role played by biodiversity in ecosystem functioning but also from heightened awareness of the fragility of most ecosystems. However, not all payment schemes secure the same service. Some payments are made to gain private access to particular species or habitats, while others are for buying or leasing development rights under either land lease schemes or tradable development rights systems. The largest of these are the government agro-environmental schemes, operational across Europe and North America. Under these programs, farmers receive regular payments for conservation easements, which provide a variety of environmental services including carbon sequestration, support for biodiversity and watershed protection. For example, Great Britain's Environmentally Sensitive Area (ESA) scheme conserves more than 570,000 hectares by providing payments to landowners for taking up environmentally beneficial land-use practices. The U.S. Department of Agriculture's Conservation Reserve Program pays farmers to take erosion prone land out of farm production.

Another prominent payment approach involves management contracts for habitat or species conservation on private farms, forests, or grazing lands. For example, in Costa Rica, landowners receive payments for providing biodiversity services in the form of forest conservation and reforestation. The National Biodiversity Institute (INBio) acts as a central clearinghouse for selling these biodiversity services to a host of national and international pharmaceutical companies. The companies, in turn, get bio-prospecting and gene-prospecting rights to develop new medicines. The table on the next page lists several other kinds of market-based schemes for conserving biodiversity.

Some researchers continue to identify land acquisitions with PES schemes. As is discussed elsewhere in this Source Book, land acquisitions differ from PES in that they involve transferring the property rights from the original land manager to a new one. There is no need for conditional payments because the original manager is out of the picture. Key concerns about land acquisitions are: 1) if they are enforced, they may be anti-poor, for they remove people from their lands; 2) foreign acquisition could be very unpopular politically; and 3) if acquisitions are not enforceable, then they have no conservation value. As an example, in the 1980s an advertisement soliciting donations for a U.S.-based scheme to acquire land for conservation in Latin America showed a picture of a peasant in a forest with a machete and the caption: "If you own it, they can't burn it." Without major expenditure to make the new ownership enforceable, however, the slogan would be incorrect.

Further reading

Jenkins, M., S. Scherr, and M. Inbar. 2004. "Markets for Biodiversity Services: Potential Roles and Challenges." *Environment*. Vol. 46 (6), pgs. 32-42.

Ferraro, P., and A. Kiss. 2002. "Direct Payments to Conserve Biodiversity." *Science*. Vol. 289 (29).

Market-based approaches for biodiversity conservation	
Type	Mechanism
PES-type approaches	
Payments for access to species or habitat	
Bio-prospecting rights	Rights to collect, test, and use genetic material from a designated area
Research permits	Right to collect specimens, take measurements in area
Hunting, fishing, or gathering permits for wild species	Right to hunt, fish, and gather
Ecotourism use	Rights to enter area, observe wildlife, camp, or hike
Payment for biodiversity-conserving management	
Conservation easements	Owner paid to use and manage defined piece of land only for conservation purposes; restrictions are usually in perpetuity and transferable on sale of land
Conservation land lease	Owner paid to use and manage defined piece of land for conservation purposes for defined period of time
Conservation concession	Public forest agency is paid to maintain a defined area under conservation uses only; comparable to a forest logging concession
Community concession in public protected areas	Individuals or communities are allocated use rights to a defined area of forest or grassland in return for commitment to protect the area from practices that harm biodiversity
Management contracts for conservation on private lands	Contract that details biodiversity management activities and payments linked to the achievement of specified objectives
Non PES-market based approaches	
Purchase of high-value habitat	
Private land acquisition	Purchase by private buyers or non-governmental organizations explicitly for biodiversity conservation
Public land acquisition	Purchase by government agency explicitly for biodiversity conservation
Tradable rights under cap-and-trade regulations	
Tradable wetland mitigation credits	Credits from wetland conservation or restoration that can be used to offset obligations of developers to maintain a minimum area of natural wetlands in a defined region
Tradable development rights	Rights allocated to develop only a limited total area of natural habitat within a defined region
Tradable biodiversity credits	Credits representing areas of biodiversity protection or enhancement that can be purchased by developers to ensure they meet a minimum standard of biodiversity protection
Support of biodiversity-conserving businesses	
Biodiversity-friendly businesses	Businesses share in enterprises that manage for biodiversity conservation
Biodiversity-friendly products	Eco-labeling

Source: Scherr, S., A. White, and A. Khare. 2003. *Current Status and Future Potential of Markets for Ecosystem Services in Tropical Forests: An Overview*. Forest Trends. Washington, D.C.

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