



PAYMENTS AND CONDITIONALITY

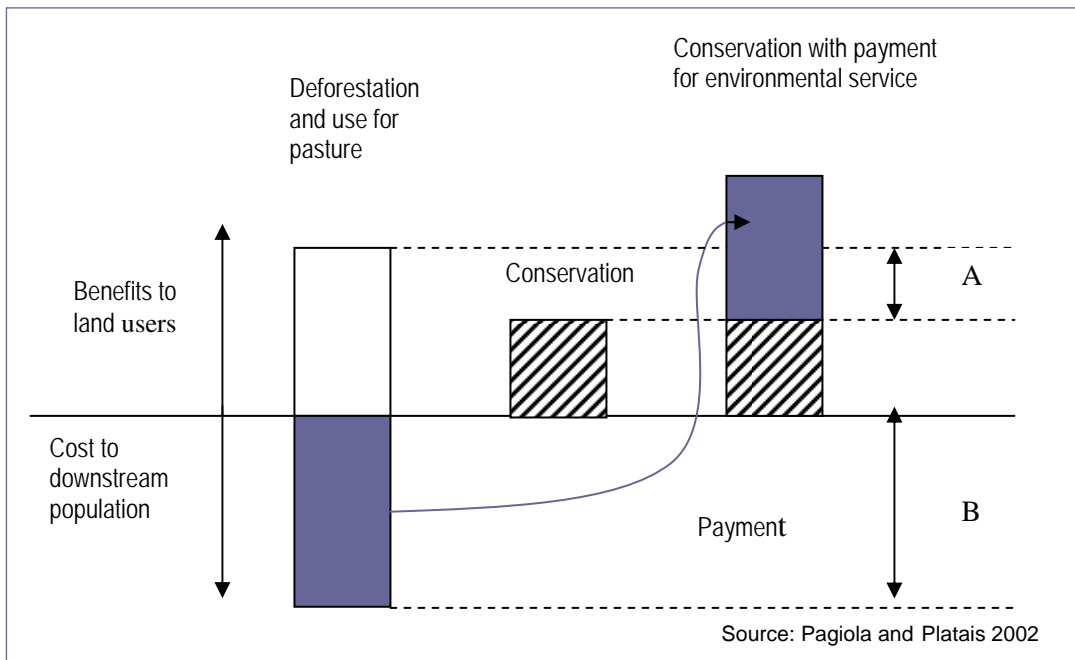
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Introduction

PES programs are based on the principle that land users who provide useful environmental services should receive payments from people who consume these services. These payments, also referred to as rewards or compensation, as discussed below, can be made for reducing environmental threats (foregoing land use that is detrimental to downstream communities) or for investing in new land-use practices that create positive benefits for downstream communities². The logic behind all payments is the same, as shown in the figure below.



The economic logic of payments for environmental services

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² The word “downstream” is used generically here. It can range from people who literally live downstream in a watershed to people who live off-site but consume environmental services produced by others.

As illustrated, when land users cut a forest and convert the land to pasture, they receive economic benefits from selling timber and raising livestock. This deforestation generates a negative externality for downstream communities in the form of increased cost of flooding and sedimentation. Upstream land users may be reluctant to conserve the forest or plant new trees if the opportunity cost of conservation (the economic benefits from converting the forest to pasture) exceeds the direct benefit to them, say, from non-timber forest products and any other benefits associated with the forest. A payment from the downstream population to upstream land users can change this incentive structure. It will give land users a direct incentive to invest in conservation, as economic benefits to them are greater than their opportunity cost. For the payment to be viable, it should be greater than the difference between the benefits from deforestation and conservation for upstream land users (segment A), and less than or equal to the cost downstream communities face due to upstream deforestation (segment B).

Rewards or compensation?

Instead of using the term “payments,” some people prefer to call them “rewards” or “compensation” for environmental services. The terms have only subtle differences, although “rewards” and, to a lesser extent, “compensation” invoke the idea that the payment need not be in cash. All the terms are equally valid, and in many respects the differences lie in the eye of the beholder: people vary in how they interpret them. In any case, the idea is to adequately cover the opportunity cost of service providers in securing an environmental service. Cash payments can be any amount more than the minimum willingness to accept (for service providers) and less than the maximum willingness to pay (for buyers). The minimum payment that service providers may be willing to accept presumably covers the opportunity cost of other foregone opportunities, any investment costs they must make in a new land use that generates the environmental service, and an appropriate risk premium if landowners fear that an environmental service contract will create new risks. If providing the environmental service requires an investment but does not involve foregone opportunities, then it is possible that service providers are recompensed only when they invest in new land-use practices, and land users who do not incur costs do not receive any payment. Compensation in this case would ensure strict additionality.

Non-cash rewards follow the same principle: They must offer economic benefits acceptable to the providers. Non-cash rewards may be in an indivisible form that provides benefits to all the people in an area, for example, by providing government services or land tenure security. This may be attractive in a group setting to avoid the transaction costs associated with paying numerous small landowners and ensuring that each receives his or her share. For simplicity, in this Source Book we use the term “payments,” which, depending on context, can also be interpreted as either rewards or compensation.

Direct and conditional

PES is distinct among incentive-based conservation approaches because it provides direct inducements to service providers, conditional on continued provision of the service. Directness implies that payments or other economic benefits are directly targeted to provision of the service. For example, a payment made in exchange for providing the environmental service is perfectly direct, but a payment or reward that is embedded in some kind of broader economic development initiative is not very direct. Similarly, a benefit that accrues to the entire community may not provide direct incentives to each individual member to adhere to the land-use practices that constitute the environmental service. In other words, they may have an incentive to act as free riders, and it is up to the community to enforce compliance.

Regular monitoring is necessary to determine conditionality. However, it is easier to establish conditionality for some services (carbon sequestration) than others (scenic beauty) due to existence of

objective criteria that determine the level of the service. Program managers also need to decide whether to monitor output (tons of CO₂ sequestered, reduction in silt load), or changes in land use (afforestation on a certain proportion of the land, adoption of no till agriculture), or change in agricultural inputs (reduced use of fertilizers). Often the choice of a monitoring protocol is driven by the kind of technology that is available and the need to achieve a balance between high monitoring costs and the need to establish strict conditionality.

Conditionality in turn implies that payments are made only as long as the environmental service in question is provided. Ideally, for payments to be conditional requires that they be made over time rather than up front. In the case of one-time payments (e.g., up-front cash or building a road or granting land titles), the service buyer has no leverage over the seller to continue providing the service. Long-term conditionality requires that rewards can be revoked or that payments continue to be offered over time.

Some examples illustrate directness and conditionality:

The International Small Group and Tree Planting Program (TIST), India. This program pays local farmers for sequestering carbon through plantations on private lands. Participating farmers receive quarterly payments on the basis of each live tree on their farms. If a farmer cuts down a tree, the payments are reduced accordingly. Payments are financed by selling carbon sequestration offsets to international buyers.

Sumberjaya, Indonesia. Under the Indonesian government's social forestry or HKM program, groups of land users have received licenses that provide tenure security, conditional on protecting natural forest and growing coffee in a way that controls the flow of silt into the downstream hydroelectric power station. This is an example of a noncash reward mechanism. The license can be revoked if the group does not adhere to the environmental service agreement.

WfW, South Africa. The Working for Water (WfW) program is a public-works program that employs low-skilled and unemployed laborers to remove invasive plant species, primarily from public lands. The program is funded through government budgetary allocations. It compensates workers for their labor to secure environmental services on public land. This is more a public works program and less a PES program since the actual land managers are not the ones receiving payment for providing an environmental service.

Nhambita Community Carbon Project, Mozambique. Members of the Nhambita community have taken up agroforestry in return for carbon sequestration payments. A portion of the payments is provided directly to individual farmers depending on the area under each property that is put under agroforestry, while the balance is deposited in a community account. The community account can be used to take up development projects that benefit all local residents. Payments are funded partly through donor support and partly through sale of carbon sequestration credits to international companies.

Further reading

Pagiola, S., and G. Platais. 2002. *Payments for Environmental Services: Environmental Strategy Notes*. No. 3. The World Bank, Washington D.C.

Wunder, Sven. 2005. *Payments for environmental services: Some nuts and bolts*. CIFOR Occasional Paper No. 42. Center for International Forestry Research.

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