



## The role of payments for environmental services in Costa Rica's policymix

A. Chacon-Cascante<sup>1</sup>, A., Muhammad Ibrahim<sup>1</sup>, Ina Porras<sup>2</sup>

<sup>1</sup> Tropical Agricultural Research and Higher Education Center

<sup>2</sup> International Institute for Environment and Development

*mibrahim@catie.ac.cr*

### Abstract

**Payments for Environmental Services (PES) and conservation policies.** A PES is an economic instrument that addresses an environmental externality through a variable payment, cash or in-kind. In here, **providers or sellers** of environmental services (public or private) respond to the offer of a payment a service buyer (private company, NGO, local or central government agency) who is distinguishable from the seller. Contracts are voluntary, at least on the supply side, and **conditional** on previously agreed land use that is expected to provide an environmental service. Ideally, payments should be variable and linked to the level of environmental service provided. In the practice other arrangements exist, including in-kind, and one-off payments, at the expense of reduced conditionality.

With limited information about the wide range of economic values associated to biodiversity conservation, PES deals try to cover at least the opportunity cost of land, and prevent forest loss (where this is an alternative, such as in Norway and Finland), or compensate for the cost imposed on the landowner when the law forbids land use changes (such as in Costa Rica and Ecuador). In order to maximise the potential sources of funding, conservation deals try to bundle complementary environmental services, for example biodiversity, protection of carbon stocks, and protection of water quality.

**Actors involved.** *Sellers* of environmental services are those agents who are in a position of safeguarding the provision of environmental services during the contract (or specifically the land-based activities expected to provide these services). They can be private landholders, informal occupiers of public lands, communal landowners, and NGOs managing protected areas. *Buyers* of environmental services can be direct users (in direct contracts), or grouped under a third party, usually the government or some form of other group like an NGO. *Intermediaries and facilitators* play an important role in these deals: they either manage the schemes or provide ancillary services. A key to equitable PES is the ability to find an intermediary to group small providers, often dispersed, and keep transaction costs low. They include NGOs (international, national and local), donors, government groups, the academic sector, trusts and user associations

**Environmental effectiveness.** Proof of environmental effectiveness in PES is increasingly demanded, although quality studies are not abundant. Effectiveness depends on the baseline used to perform the estimations and on the monitoring system, but also on how the scheme has been defined and whether it ensures additionality, minimizes leakage and permanence. These concepts have been given low priority in the majority of on-going schemes, with a high reliance on 'precautionary principle'. This situation is changing, as



funds become scarce either because of excess of supply, and/or because service users rightly demand a show for their buck. Effectiveness in voluntary contracts in some cases is increased by assigning preference criteria (i.e. deforestation-risk areas, or biological-corridors); or making differentiated payments. Increasingly, rigorous impact evaluation studies (i.e. Mexico and Costa Rica) and the use of tools such as optimisation algorithms provide guidelines as to how programs fare and how they can improve their environmental impacts.

**Cost-effectiveness.** Overall, little is known about cost-effectiveness of existing PES schemes, and even less how they compare to other policy instruments. In theory PES should be sleek creatures, where service providers make offers for the contracts based on their own private assessment of opportunity costs. Buyers make payments based on the value of the environmental service, the perceived level of the threat that the ecosystem will change, the perception of how this will affect their reputation, a compulsory fee imposed by a third party (i.e. municipality or national government), or a combination of all of the above. Cost-effectiveness of PES is evaluated based on those opportunity costs, the costs of implementing changes when they are required, and the transaction costs of the program. Costs are correlated to the type of activity subject to payment (i.e. if expensive changes are required), and the possibilities of economies of scale (as opposed to fragmented, small parcels). Start-up costs are very high, and they can include setting up the scheme, baselines, contract negotiation, fundraising, and awareness campaigns. Cutting corners is a common practice, for example, few public consultations and badly done baseline studies, although it may have negative effects in the long-term regarding project uptake.

**Impacts on the poor.** Evidence suggests that PES programs have not been successful in poverty alleviation or in the best of cases have had a mixed effect. PES in particular has a potential to benefit, and harm, poorer households. In the practice, PES tend to benefit a large proportion of wealthier landowners in possession of more and better assets, with access to livelihood options which do not depend on the land, larger properties, better connected and informed, and just as likely (or more) to receive payments if they happen to live in designated social target areas. Transaction costs tend to be fixed for the provider, and the higher the cost the less likely poorer household will enter, and in many developing countries the poorest farmers, indigenous groups without connections, and women have been excluded from project design and implementation. Pitfalls such as these in emerging markets contribute to reinforcing existing power structures, inequities and vulnerabilities. So far, markets for ecosystem services are, in effect, limited in promoting more legitimate forms of decision making and a more equitable distribution of their outcomes in the developing world context. The situation may be different in developed countries (Norway and Finland), where the introduction of voluntary contracts seems to increase legitimacy and sense of justice, as opposed to compulsory conservation.

**Their role in a policy mix.** PES is designed to complement existing legislations regarding the use of ecosystems (i.e. cap and trade), and to help align local malpractices through negotiation between parties where no legislation exists. PES coexists in many places with command-and-control, making prohibitions 'more palatable', for example those evicted from reserves, people living inside or in buffer areas of national parks and reserves who have restricted activities, and increasing self-enforced restrictions by raising the value of the environmental services. By focusing on variable payments, PES has more chances of success than Integrated Conservation Development Projects (ICDPs) and the lessons from attaching



social objectives to environmental policies used in ICDPs are valuable material for PES schemes.

Trade-offs are highly likely to occur, whichever instrument is used. However, inconsistencies between practice and theory are responsible for the questionable success of the Program in protecting ecosystems. Some command and control instruments (such as protected areas and/or legislation) must be simultaneously addressed. On the other hand, if poverty reduction is among the goals of the program, authorities must address institutional poverty factors to accompany the project (such as improvements in health, education, and sanitation), which a PES on its own will not be able to address.