



# Lessons Learned for REDD+ from PES and Conservation Incentive Programs

Examples from Costa Rica, Mexico, and Ecuador





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*Cover photo:* Ranjith Ranjith/World Bank

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## Background

*What's it about?*

This Policy Brief originates from discussions at the 16th Conference of the Parties of the UNFCCC in Cancun in December 2010 between representatives of Costa Rica, Ecuador and Mexico, the World Bank and Forest Trends. These discussions focused around learning for REDD+ from these countries' payments for environmental services (PES) programs and, in the case of Ecuador, its conservation incentives program 'Socio Bosque'. This Policy Brief is drawn from a paper (Forest Trends 2011) combining lessons from the country experiences with observations from the wider literature.

## Brief synopsis of the country programs

Costa Rica and Mexico have been pioneers in the creation of PES mechanisms. **Costa Rica** started its PES Program (PSA) scheme in 1997, coordinated by the National Forestry Financing Fund (FONAFIFO) with funds from a tax on fossil fuels. By 2009, there were 671,000 hectares under the PSA. This helped increase national forest cover from 44% in 1998 to 51% in 2005. Costa Rica's experience is also notable as regards establishing an enabling policy, legal and institutional framework for PES.

**Mexico** started its Hydrological Environmental Services Program (PSAH) in 2003 with earmarked funds from national water fees. The PSAH involves

payments to landowning 'ejido' and 'agrarian communities', as well as individual landowners, for maintaining forest in hydrologically important areas. In 2004, the Payments for Carbon and Biodiversity Services Program (PSA-CABSA), which includes agroforestry systems, was added. These programs, managed by the National Forest Commission (CONAFOR), have now been integrated into the Program of Payments for Environmental Services (PSAB). PSAB currently covers 2.2 million hectares of forest.

More recently, **Ecuador** created the Socio Bosque program of conservation incentives in 2008. In addition, in June 2009 the Ministry of Environment established the "Páramo Chapter" of Socio Bosque resulting in the additional conservation of about 18,000 hectares of this Andean ecosystem of great importance for protecting and regulating water resources. By 2011 about 868,000 hectares of native forest and other priority ecosystems were protected.

## **PES and conservation incentive programs as building blocks for national REDD+**

Reducing Emissions from **D**eforestation and Forest **D**egradation *plus* conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks (REDD+) aims to create incentives for developing countries to invest in forest based reduction of greenhouse gases. Three common provisions of PES programs are particularly relevant to REDD+: payments are conditional on performance (or at least on realizing conservation activities), they require well-established legal and policy frameworks, and they need effective monitoring.

Based on the three national experiences and the wider PES literature, Costa Rica, Mexico and Ecuador, supported by Forest Trends (2011), The World Bank and several experts, have identified key lessons (some of them overlapping and most of them interrelated) for informing the transition to REDD+ or incorporation of the current national program as a sub-program of the national REDD+ program. Table 1 lists a set of lessons grouped into five main areas.

**Table 1. Summary of lessons learned for REDD+ from PES/Conservation incentive programs**

<i>Areas of lesson learning</i>	<i>Lesson titles</i>
1. Participation agreements	<ul style="list-style-type: none"> <li>• Participation agreements in national programs: challenges and synergies</li> </ul>
2. 'Equity' or social objectives	<ul style="list-style-type: none"> <li>• Progress towards enabling a legal, policy and governance framework</li> <li>• Good governance and appropriate institutions at multiple levels</li> <li>• Adopting a rights-based approach</li> <li>• Tackling obstacles to participation of the poor</li> <li>• Credible monitoring of social outcomes and impacts</li> </ul>
3. Trade-offs and synergies between multiple (ecosystem) benefits	<ul style="list-style-type: none"> <li>• Accounting for multiple benefits in targeting payments or incentives</li> <li>• Explicitly considering multiple benefits in evaluating outcomes</li> <li>• Evaluating synergies and trade-offs with other programs</li> <li>• Designing payments or incentives that reward multiple benefits</li> </ul>
4. Measuring, reporting, and verification (MRV)	<ul style="list-style-type: none"> <li>• Measuring indicators and technologies: synergies between PES and REDD+</li> <li>• Measuring effectiveness: quantification and attribution of program impacts</li> <li>• Addressing leakage through program design and monitoring</li> <li>• Cost-effective MRV and potential trade-offs</li> <li>• Human capital investments for effective MRV</li> </ul>
5. Sustainable finance and administrative costs	<ul style="list-style-type: none"> <li>• Diversified funding sources and financial sustainability</li> <li>• Engaging the private sector with public programs</li> <li>• Funding flows—context matters</li> <li>• Controlling administrative costs</li> </ul>

## 1. Participation agreements

*Area of lesson learning*

### ***Participation agreements in national programs: challenges and synergies***

Contracting for conservation incentives and PES raises complex issues for participants and government regulators alike. For example, the contract scope must be carefully and clearly delineated to avoid confusion, to prevent fraud and abuse, and to create robust frameworks for rewarding conservation actions or outcomes. A key challenge is how to make complex legal documents more accessible to less literate participants. Experiences with participation agreements in conservation incentive programs in Costa Rica, Mexico, and Ecuador are instructive for developing REDD+ generic contracts.

The political and institutional contexts for these agreements are very important. Good coordination among relevant regulatory bodies is essential for keeping REDD+ administrative costs down and enhancing success. Access to technical support and training are also essential for increasing program reach and efficacy. In terms of their content, PES or conservation incentive participation agreements provide a useful framework for REDD+ participation

agreements—they are standardized and short, and reference more detailed program guidelines and procedural details. There are however key differences when considering emission reductions or removals. REDD+ participation agreements will need to borrow experience from the emission reduction purchase agreements (ERPAs) used in carbon markets other than PES programs.

*Area of  
lesson learning*

## **2. 'Equity' or social objectives**

A central concern of PES and REDD+ is a possible trade-off between social and environmental objectives. In the country programs there is little evidence of a trade-off in the sense that social objectives are losing out to environmental objectives, but there is evidence that the latter have been affected by the strong social objectives resulting from social and political pressures (e.g., for PES to meet wider government development objectives). The challenge in the context of REDD+ is how to increase carbon additionality without sacrificing positive social outcomes; the ideal is to achieve 'win-win' outcomes, but these have historically proved very elusive.

### ***Progress towards an enabling legal, policy and institutional framework***

It is essential to combine direct incentives with progress towards an enabling policy legal, policy and governance framework. A key area includes property rights and tenure: the wider evidence is that communities tend to protect forests better than governments; that more secure or clearer tenure can encourage conservation, but is not by itself a sufficient condition when opportunity costs are high; and that tree or forest tenure is critical to resource user incentives. The three countries have made good progress in building an enabling framework, but also face some challenges:

- *Costa Rica* has recognized carbon and other ecosystem service rights as belonging to landowners, and has a clear legal and institutional framework for PES under Forestry Law No. 7575, but under half of forest 'owners' have clear land title.
- In *Ecuador*, other REDD+ components (apart from Socio Bosque) include land tenure and titling, establishing the legal, financial and institutional framework, and inter-sectoral planning, but carbon property rights are currently unclear.

- In *Mexico*, tenure is clear with 'ejidos' and 'agrarian communities' owning 70% of forest area, while almost all the rest are small area properties own by single families but there are some inter-sectoral policy conflicts: agricultural subsidy programs promote high value crops and basic grain production resulting in forest clearance in some areas.

### ***Good governance and appropriate institutions at all levels***

Good governance and appropriate institutions are essential at all levels—for effective and equitable program management, supportive local governance arrangements, lower transaction and implementation costs and benefit sharing mechanisms, and because they affect the opportunity costs of SFM and conservation. It is possible to identify some 'win-win' opportunities, for example, in Mexico weak community governance often coincides with high deforestation threats. In addition, strong community institutions, like in the case of Mexico, have favored positive social and environmental outcomes.

The country programs also reveal good adaptive management capacity as reflected in the frequent reforms. They have tended to bring in third parties such as forestry consultants (in Costa Rica) and civil society organizations (in Mexico) for compliance monitoring, but some observers note that the performance of these parties is insufficiently monitored. Looking ahead to REDD+, the full paper sets out some well-established institutional design principles that are associated with success, promote accountability via easy to understand rules that cover sanctions, conflict management and adjudication, and can be monitored and enforced locally.

### ***Adopting a rights-based approach***

A rights-based approach ties in closely with the social safeguards agreed in Cancun and international legislation. It includes land and carbon property rights, as well as a more general set of human rights associated with forest peoples' rights to make decisions and live a peaceful and secure life. The right to free, prior and informed consent (FPIC) is being incorporated into national procedures, but as yet there does not appear to have been a significant project application of FPIC in these countries.

It has been noted that a rights-based approach to REDD+ should include *inter alia* the training of forestry officials in their rights-related responsibilities, increased transparency of data and decision-making, and the reform of laws, regulations and administrative and judicial mechanisms

to recognize and protect forest peoples' rights. Also as FPIC emerges, countries can promote good practice through national standards or norms for conducting FPIC.

### ***Obstacles to participation of the poor***

A lesson from PES and other programs is that high transaction costs, eligibility criteria associated with land titles, and other entry barriers, such as educational levels and poor understanding of a program can make it difficult for the poor to participate. Transaction costs relate to the complexity of application procedures and the quality of program outreach with poorer applicants.

The country programs have responded to these challenges, for example, by simplifying application procedures, recognizing possessory rights short of a formal land title (Costa Rica) and making alliances with civil society and NGOs to socialize and expand the program (Ecuador); in Mexico, transaction costs are relatively low since contracts are with community authorities.

### ***Credible monitoring of social outcomes and impacts***

One reason why it is hard to find evidence which supports or contradicts views about the social effects of PES is the paucity of credible data. Either social impacts are not measured at all or monitoring systems do use methods that factor in 'attribution' or cause and effect. This causes contested views on social benefits and trade-offs, prevents clear lesson learning for project and program design (via ex-ante social impact assessment), and inhibits adaptive management.

There is little experience with monitoring social impacts in these or other countries. Under REDD+ there will be increasing pressure on countries to show that the social and biodiversity 'co-benefits' of carbon are 'real' and additional—especially if there is a price premium for 'equitable REDD+'. There is therefore an urgent need for practical guidance in cost-effective social impact assessment of REDD+. This need is being met at the project level, but progress at the national level is slightly slower. This is however a key objective of both the Strategic Environmental and Social Assessment (SESA) process of the World Bank Forest Carbon Partnership Facility and the recently established Learning Initiative for Social Assessment of REDD+ (LISA-REDD).

### **3. Trade-offs and synergies between multiple (ecosystem) benefits**

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lesson learning*

The close inter-relationship between biodiversity and environmental services provides opportunities for multiple (ecosystem) benefits, but also includes the potential for trade-offs. Very few assessments have been made of how a PES focus on one environmental service can impact other environmental services. Given the potential of REDD+ to affect land management over larger areas and leverage further finance, explicit consideration of environmental trade-offs and synergies is critical.

#### ***Accounting for multiple benefits in targeting payments or incentives***

Most PES programs struggle to account for outcomes for the targeted environmental service, let alone account for outcomes in terms of multiple benefits. REDD+ programs will face similar challenges in accounting for multiple benefits due to the inherent high variability in biodiversity and environmental services; lack of data on the relationships between specific land management actions, and the types, quantity and quality of environmental services provided; and weak definition of (and metrics for measuring) the environmental services provided.

To account for environmental service outcomes, most PES programs use simple proxies (e.g. forest or non-forest area). Although forest conservation can be assumed to provide multiple benefits, it will be important to assess how REDD+ carbon sequestration options affect other services.

There are three main ways that PES programs can account for trade-offs and synergies across multiple benefits in the targeting of payments:

- aligning PES targeting with national or regional land use or conservation priorities;
- evaluating the spatial overlap among multiple benefits in targeting payments; and
- using multiple criteria for scoring or ranking eligible projects.

Each approach involves data and cost challenges. However, explicitly addressing trade-offs and synergies in targeting can increase the ecological effectiveness and economic efficiency of PES programs. Ecuador, Costa Rica and Guatemala have begun developing spatially explicit information and

maps of the overlap among areas important for carbon, biodiversity, and water-related services. This approach establishes a basis for evaluating how PES can enhance (or detract from) provision of multiple services, or achieve other conservation goals such as expanding protected areas. Mexico and Costa Rica have refined and adapted their eligibility criteria and ranking of projects based on experience in early phases of their PES programs, and can target areas where multiple benefits *and* deforestation risks are greater. The emerging spatial analyses will provide vital data to help REDD+ programs support other conservation priorities.

### ***Evaluating synergies and trade-offs***

PES or REDD+ programs can compete with other environmental goals and priorities or be undermined by competing programs and priorities (e.g., agricultural expansion, biofuels, and major roads). Only by understanding positive and negative impacts on other services will it be possible to design REDD+ programs that integrate multiple goals for development and conservation.

Few PES programs explicitly consider trade-offs and synergies with other programs. REDD+ strategies need to evaluate and manage synergies and trade-offs, and engage with multiple stakeholders to align REDD+ with other policies. For example, REDD+ strategies should support programs promoting the sustainable production of high-value crops (e.g., the Roundtables for Sustainable Soy and Sustainable Palm Oil), and strengthen environmental impact assessment (EIA) regulations.

### ***Designing payments or incentives that reward multiple benefits***

In theory, PES programs that reward multiple benefits have several advantages over programs that pay for a single service. A lesson of Mexico's PSAB is that successful programs are linked to a clear perception of the relationship between forest conservation and multiple benefits. Multiple payments would provide stronger incentives for conservation, whereas payment for a single service may not cover opportunity costs. PES programs have more chance of success if funds from different services can be combined. For example, in Bolivia an initial biodiversity payment for forest conservation provided the start-up costs to allow a watershed payment services program to be designed and implemented, with long-term funding from water users. But the challenges associated with multiple ecosystem service payments

(additionality, metrics, accounting and relationships between management activities and service provision) will substantially increase transaction costs.

Despite these challenges, PES programs have explored several ways or rewarding multiple benefits: payments for different services over time in Bolivia; tiered payments based on the importance of areas for particular services in Mexico and Costa Rica; and payments tied to a points system in the above-mentioned Silvopastoral Project. Monitoring data from the latter suggest that it has resulted in greater environmental benefits and additionality than some other PES programs in the region. Payments that reward multiple services can also help ensure that a narrow focus on carbon in REDD+ does not result in a trade-off with other vital ecosystem services such as biodiversity and water.

#### **4. Effective measuring, verification and reporting**

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To benefit from results-based REDD+ financing, countries must use robust measuring, reporting, and verification (MRV) systems. Efforts to develop and implement these systems can benefit from the experiences of conservation incentive programs, which have been developing and testing MRV systems for years. At the same time, new MRV systems and data collected for REDD+ can strengthen these programs and could even allow them to benefit from REDD+ finance.

##### ***Monitoring indicators and technologies: synergies between PES and REDD+***

Emerging REDD+ programs can benefit from the monitoring efforts of the conservation incentive programs. Existing data and systems for monitoring forest cover—the dominant monitoring indicator—can inform REDD+ data sets if the methods, protocols, and definitions are consistent. Moreover, REDD+ programs can explore synergies with ongoing site visits in the national programs to monitor land use changes that are more difficult to track than deforestation, but are real opportunities for REDD+—namely forest degradation, improved forest management, and carbon stock enhancement.

REDD+ monitoring, on the other hand, can help conservation incentive programs by identifying significant deforestation events on incentive properties or highlighting areas experiencing increased deforestation, and which

need more support and/or compliance enforcement. There are however distinctions in the general requirements for REDD+ (e.g., specific project activities, land uses, and vegetation types) that preclude direct MRV synergies with incentive programs.

### ***Measuring effectiveness: quantification and attribution of program impacts***

Attributing precise levels of conservation (or emissions reductions) to a specific incentive (or REDD+) program is inherently difficult, since it requires one to credibly describe a counterfactual scenario, and it is even more difficult when program participants have very different socio-economic and biophysical characteristics. While assessing program effectiveness requires careful design, it need not be prohibitively expensive. A research design in which impacts are attributed from the start, and based on a sound counterfactual or reference scenario, rather than *ex-post* is far more likely to generate accurate and reliable data.

### ***Addressing leakage through program design and monitoring***

Although national REDD+ programs aim to account for leakage through national systems of monitoring and accounting, preventing activity displacement or market leakage is very challenging. To the extent that conservation incentive mechanisms are used as tools for REDD+, specific leakage mitigation measures are needed—these include a requirements to enroll all forests within a property to avoid intra-property activity shifting; a balanced system of sanctions for deforestation in parallel with incentive payments; and the careful design of agricultural or livestock intensification in non-forest lands alongside incentives for forest conservation.

### ***Cost-efficient MRV and potential trade-offs***

Emerging REDD+ programs need to be aware of the costs associated with MRV, including the costs of acquiring remotely-sensed data, processing and analyzing the data, ground-truthing it, assigning carbon densities through site visits, and administrative costs. The MRV system may also require population and socio-economic data in order to construct an accurate baseline—collecting this can be complex and expensive. In general, the more precise that the data needs to be, the higher will be the cost. A reasonable

cost of monitoring for REDD+ is 10% of total costs; the national incentive programs have expended about 15% on monitoring costs.

### ***Human capital investments for effective MRV***

Mexico, Costa Rica, and Ecuador are taking advantage of REDD+ readiness funding for investing in human and institutional capacity to create a timely, accurate, and cost-effective MRV system. The country experiences suggest that a cost-effective approach is to employ third-parties to undertake much of the monitoring, especially the site visits. It may also be cost-effective to engage community members and NGOs to monitor compliance and track indicators that are difficult for program staff to monitor. This would help increase community ownership and social capital.

## **5. Sustainable finance and administrative costs**

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A key challenge for PES and REDD+ programs is financial sustainability, i.e., creation of a stable long-term funding path to achieve the desired outcomes. The financial success of PES and REDD+ hinges on integration at various levels: integration of different sources of public and private finance; of regional scales and duration of funds; and integration of administrative processes for fund disbursement, MRV, and registration. Designing PES and REDD+ programs to complement certification programs, compliance requirements, state funding, and agricultural project finance will facilitate enrollment, maximize co-investment, and amortize transaction and administration costs across programs.

### ***Diversified funding sources and financial sustainability***

To secure sustainable land use changes, a PES program depends on a predictable delivery of financial incentives over time. PES and REDD+ programs require an incentive structure that delivers start-up funds for rapid uptake of best practice, along with consistent payments to address landowner financial risk. As well as balancing short and long-term payment solutions, combining funding sources and types can increase the financial security of PES and REDD+ programs. Recognizing these challenges, some countries have included mechanisms such as environmental endowment funds which facilitate long-term multiple investments. These have added

to financial sustainability as payments are made from capital interest. Advocates of national REDD+ approaches see advantages of funding mechanisms that can leverage national, public, donor and market revenues which can help address the funding gap in the early stages of program and project development.

### ***Engaging the private sector with public programs***

While public funding has been prominent in the three programs, it may be limited in the longer term. To ensure sustainable land use change, public funding for conservation activities is best structured to leverage private investment. This can be accomplished through tools such as loan guarantees, guaranteed fix priced payments, tax incentives and other mechanisms that are already successfully deployed to stimulate investment in the renewable energy sector. Using public finance to establish institutional frameworks that reduce private sector risk and embed REDD+ in a broader development vision is an important goal of readiness programs. Rather than ‘crowding out’ private sector finance by over-regulating ecosystem services provision, public funds could be used to mitigate specific risks facing the private sector. Public-private institutions offer a high potential strategy to leverage private funding in national conservation initiatives.

### ***Funding flows—context matters***

Incentives directed at financing gaps can help PES programs become efficient and catalytic. By linking PES with existing conservation or land use programs, such as micro-credit financing to farmers and forest landowners, PES is not the only way to finance a land use change, and the financial sustainability of the conservation activity can be enhanced. In the three national incentives programs, landowners are paid to not deforest. This preventative approach implies that payments need to continue indefinitely, an unlikely scenario. In REDD+ it will be important to move from prevention to alternative sustainable land use models. To date, national incentive programs have not experimented sufficiently with financing alternative land uses apart from forest conservation.

### ***Controlling administrative costs***

Effective environmental targeting is costly in terms of MRV and other transaction costs, for example the costs associated with differentiated pay-

ments based on opportunity costs. Controlling administrative costs will be a big challenge for national REDD+, for example, for effective application of the REDD+ safeguards. The issues of how to incorporate the various stakeholders that will both impact and be impacted by REDD+, and how to ensure equitable benefit distribution for all forest stewards are major challenges. The country experiences indicate that the costs can be kept in check by using local technical expertise, appropriate technology and strong administrative integration.

## The way ahead

## Conclusions

This review shows that national PES and conservation incentive programs are versatile mechanisms that can evolve into different forms of positive incentives, and providing a wealth of experience for informing the development of REDD+. As shown in the diagram on page 14, developing a well-established PES program provides a valuable bridge with REDD+.

In the REDD+ preparation process, 54 countries have so far expressed interest in developing REDD+ strategies to be ready for the post-Kyoto period, and at least one half of those countries<sup>1,2</sup> have a readiness plan approved or pending approval. Most of these plans mention the use of positive incentives to achieve REDD+ objectives, and have specified PES as the main driver of these strategies. Moreover, many countries have shown a strong interest in the national programs, and several have made country visits with the aim of establishing lines of collaboration for early action. Particular interest has been shown in aspects such as local governance, forest inventories and monitoring systems.

A simple way of ensuring that REDD+ plans take account of the valuable lessons of experience from the national experiences is for the 'new' countries to work together with more experienced ones. Thus Costa Rica, Ecuador, and Mexico could act as 'coaches' with donor support to avoid such 'south-to-south' exchanges becoming a financial burden.

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1 November 2011. This policy brief has been prepared by Costa Rica, Mexico, and Ecuador with support from Forest Trends and The World Bank, from the paper and a workshop discussion on Lessons Learned for REDD+ from PES and Conservation Incentive Programs in Costa Rica, Mexico and Ecuador.

2 REDD+ Partnership, FCPF, UN REDD.

## PES to REDD+ connections

### Achievements

#### PES or conservation incentives systems

- Provide incentives for forest owners or legal possessors to stop or mitigate deforestation and/or degradation.
- Allows for the establishment of monitoring systems, improve governance structures, and encourage social involvement.
- Contribute to emission reductions that can be acceptable as fast-start actions in the REDD+ framework.
- Kindle the rural economy creating jobs by stimulating integrated management of forest resources.
- Contribute solving the problem of poverty thus avoiding migration to the cities, which forest management, conservation policies and rural programs in most countries have failed to mitigate.
- Formalize property rights by revising both land titling and property limits definitions.
- Enhance conservation awareness and its contribution to mitigate climate change.
- Identify vulnerable ecosystems with deforestation risks and prioritize conservation actions.

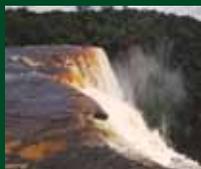
PROVIDE INSTRUMENTS FOR SOLVING:

### Obstacles

#### Obstacles in the REDD+ Process

- Governments' failure to recognize the land rights of forest communities. Yet the traditional knowledge and practices of these communities, including Indigenous Peoples, have enabled the sustainable management and conservation of natural forest areas for thousands of years. These communities have the right to occupy their ancestral lands and freely access the resources there.
- Lack of knowledge and capacities, and ineffective communication.
- Subsidy approaches are vulnerable to problems of, for example, additionality, leakage and perverse incentives, all of which imply the need for strong governance.
- Trade-off of multiple objectives (co-benefits): equity and poverty alleviation as fundamental requirements versus no prioritizing such co-benefits at the expense of successful carbon storage.





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