

# Payments for environmental services in Costa Rica: from Rio to Rio and beyond

Costa Rica has shown how a small developing country can grab the bull of environmental degradation by the horns, and reverse one of the highest deforestation rates in Latin America to become the poster child of environment success. Key to its achievement has been the country's payments for environmental services (PES) programme, which began in 1997 and which many countries are now looking to learn from, especially as water markets and schemes to reward forest conservation and reduced deforestation (REDD+) grow. Within Costa Rica too, there is a need to first reflect on how the contexts for, and challenges facing, PES have changed; and continue building a robust programme that can ensure the coming decade is as successful as the past one.

## Policy pointers

### ■ The Costa Rican PES

Programme provides a highly effective, transparent scheme, grounded on a solid legal and financial basis with clear rules and a capacity to evolve based on feedback.

### ■ With increasing competition

from other land uses, the programme must redefine its scope as part of a policy mix of various instruments that, among other things, prohibit and regulate land use changes; increase the market value of forest products; and improve monitoring, evaluation and capacity building.

### ■ The programme must

continue to try and use robust technical and scientific solutions to define criteria for priorities and evaluation that are both measurable and have documented cause-effect chains of land use and ecosystem services, in a way that minimises potential trade-offs.

## Past success

Payments for Environmental Services (PES) schemes offer an economic instrument to support the transition towards a green economy. They are based on the legal and monetary recognition of the environmental services that forests offer — such as carbon sequestration, watershed protection or biodiversity conservation — and typically involve 'service users', such as governments, nongovernmental organisations or the private sector, paying forest owners, or 'service providers', to manage their forests sustainably.

These payments not only help protect environmental services but also help to increase the financial viability of sustainable forest activities, making them more competitive against other land uses. There is increasing recognition of the trade-offs involved in market-based mechanisms for environmental and poverty reduction objectives. In Costa Rica, the national PES programme (PSA in Spanish) is not explicitly focused on poverty reduction but it does have a legal obligation to support small- and medium-scale forest owners, and for several years has tried several policies to improve its social impacts.

Operational since 1997, the PSA programme in Costa Rica has been one of the contributing factors behind the reversal of one of the highest deforestation rates in Latin America. In 1980, Costa Rica had lost nearly three quarters of its forest. Since then forest cover has steadily grown.

Lots of things combined to achieve this growth. First was a series of economic forces, including for example the collapse of export markets for meat. Second, political factors such as the end of the Central American war and the peace process — both of which encouraged local investment and also led to the emergence of strong social and environmental movements. These issues combined with the political will of the then government to legally create the first national-level PES in a developing country.

The PSA programme is administered by FONAFIFO, a semi-autonomous public institution (see Figure, overleaf). The programme pays land managers to conserve and sustainably manage forested areas, or to reforest degraded land. Since its creation, the programme has: signed nearly 13,000 contracts; worked in nearly 800,000 hectares of forests; and

# The success of Costa Rica's PSA programme is linked to continuing good governance

distributed almost US\$280 million. The payments vary according to land use — protection and regeneration is paid at US\$64 per hectare per year, management is paid at US\$50 per hectare per year, and reforestation activities receive US\$196 per hectare per year. Within each of these activities, payments also vary depending on economic and environmental factors, for example the

extent to which the forest in question is a biological corridor or is home to native species, and if it is in an area that protects water sources.

## New contexts, new challenges

Through the years, Costa Rica's PSA programme has experimented with a series of policies in response to changing conditions. For example, it has used various forms of group contracts, opened local offices, and, more recently, introduced a criteria matrix for sieving through contract applications. But, after fifteen years of implementation, it is important to stop and take broader stock of the changing context in which the programme now finds itself, and which may affect the viability of its actions. Today, the programme finds itself facing several challenges.

**Mounting pressures.** The pressures on existing forest have changed since the beginning of the programme because of a combination of factors that include a blanket prohibition of land use change in forest areas, better monitoring of illegal logging, higher rents from forest-based activities like ecotourism, and, in remote places, low returns from alternative activities such as ranching.

On the other hand, many areas that are being regenerated face strong pressure from high-value crops, such as pineapple and ornamental plants, and

### Jargon-buster: opportunity costs

The opportunity cost of an activity describes how much you stand to lose by choosing one activity over any other alternative. For example, the opportunity cost of forest conservation may be defined as the net income per hectare per year that is sacrificed as a result of not logging (or of logging more sustainably), or as a result of not converting the forested land to agriculture. Opportunity costs are bound in time and space: they will vary depending on what causes changes in land use. Estimates of opportunity costs are affected by methodological, legal, economic, social and geographical/physical factors.

urbanisation. All this means that the financial viability of forest activities and their opportunity costs (see Jargon-buster box) have changed. Forest management and reforestation generally have low returns because of excessive regulation and an indifferent local market plagued by cheap imported timber and increasing use of man-made building products.

**Elusive social impact.** The PSA programme has tried to improve its social footprint by reducing transaction costs and targeting areas with higher poverty indexes. The importance of the payments in family income is higher in remote areas — for example within indigenous communities — where the extra cash is the main constant income. And yet some studies show that an important amount of payments are appropriated by larger — and potentially wealthier and better educated — forest owners. The increasing participation of companies (many of them small-family business) makes it more difficult to measure the programme's social impact, especially through aggregate indicators that are not linked with land ownership like the Social Development Index. Traditional socioeconomic indicators such as gender, age, education and income become more difficult to measure and monitor under the new land ownership structure.

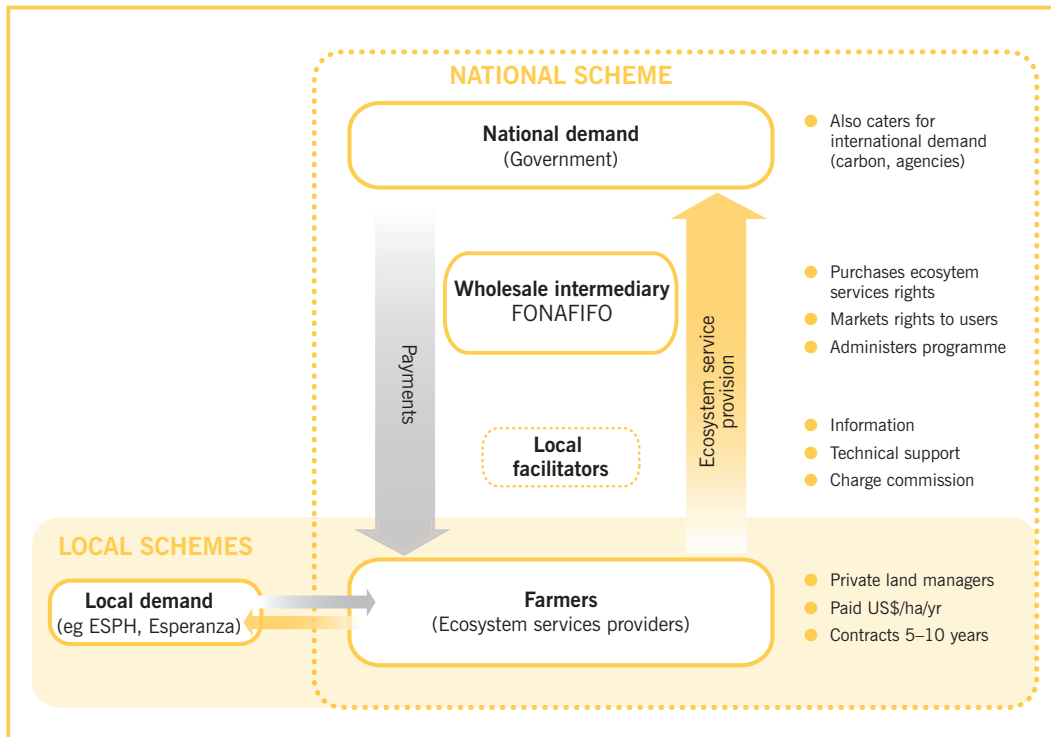
**Fewer opportunities.** When the PSA programme began, there was relatively low forest cover in Costa Rica and there were plenty of opportunities for big and rapid change. But as forest cover has increased, the rate of growth in forested area has slowed down and there are ever-fewer opportunities to increase forest cover further. The programme has already expanded to include properties with lower opportunity costs and additionality criteria required by REDD+ is forcing the scheme to look to areas where existing payment levels are financially less attractive.

**Limited funding.** A healthy environment is invaluable but it is not free. The preparation process alone for implementing a REDD+ strategy in Costa Rica will require an investment of nearly US\$4 million between 2011 and 2014. Until now, the PSA programme has been successful in securing two major sources of government funding through the fuel tax and water tax. But if the programme wants to competitively participate in international carbon markets, it will need to up its business approach. Looking forward, it will be essential that the programme hone its funding skills, from wily marketing pitched against cheap carbon elsewhere, to shrewd in-house management of available income that optimises environmental and social impacts.

## Shaping the future

The PSA programme has been steadily building towards a long-term vision that strongly targets carbon, water

Figure. How PES operates in Costa Rica



and biodiversity-centred objectives. The changing context poses a hurdle; but not an insurmountable one. PSA has already shown its capacity to re-invent and adapt. Moving forward will require expanding on measures already taken, as well as developing a stronger targeting and monitoring strategy to ensure the provision of the ecosystem services.

To cope with the changing contexts and new challenges, Costa Rica’s PSA programme (and other PES elsewhere) must first be redefined as one part of a wider policy mix that looks beyond conservation and more towards integrated landscape planning. This approach should include looking at regulations — laws, decrees and land planning that define the legal confines of land use — and more coordination with other institutions, including other environmental and water institutions, local municipalities, and academia, to improve capacity building, monitoring and evaluation.

Beyond redefining the PSA, there are four key areas for future action expanding on existing efforts. First, the programme must make sure it provides the environmental services it has been designed for. For this, it must continue to explore robust technical and scientific solutions to help define priorities and set environmental and social evaluation criteria that are both measurable and also have documented cause-effect chains. This could mean for example, the use of high-resolution satellite imagery and cadastral plans that show land ownership and tenure to map economic and ecological indicators and identify areas for strategic action.

It could also mean setting an internal system to track the programme’s environmental, economic and social impacts and provide a clear mechanism for those applying the programme in the field to feed back to the programme managers. And it means exploring different ways to define differentiated payments to improve environmental impact, based not so much on type of land use but on the quality of the ecosystem protected, and the risk of change.

The second key area for action lies in assessing the PSA’s social impact, using measurable and realistic indicators. These social indicators can be based on a combination of local-level information — such as property size or the characteristics of target participant— and aggregated indicators, such as average land values. The indicators can then be used either to guide the models used to set priorities for allocating contracts, and to evaluate how these contracts affect the livelihoods of those taking part in the programme.

In all cases, the programme should continue targeting participation by the most vulnerable farmers —through lower transaction costs, group technical support contracts, strengthened local capacity, perhaps introducing regressive payments — where payment rates drop for larger property sizes, as done in SocioBosque in Ecuador — and by promoting markets for local forest products. Clearly understanding the social footprint of the programme is key to demonstrating the co-benefits that both the

government and businesses can expect from investing in the PSA programme.

Third on the priority list for action is improving institutional alliances to share costs and data. Working with local land planning agencies, the national information system, the land registry, local municipalities and water utilities, and forest regents could significantly lower the cost of monitoring and evaluation as well as improve the quantity of data available on how and where the PSA programme is having an impact

As part of these alliances, the PSA programme needs to strengthen a marketing department, with a strong business angle and a good understanding of market processes. Such a department must be able to effectively: negotiate in international carbon markets; ensure prompt payments from legal agreements; promote new contracts (for example with the tourist sector); and capitalise on PSA's experience at the international level.

Costa Rica's PSA programme has developed an exceptional human capacity through the years, and has shown an ability to reinvent and adapt that has been internationally recognised and applauded. This strong footing should help it go forward. But its success is ultimately linked to continuing good governance. In

other words, the programme depends on coordination and team work among different social actors, valuation mechanisms with civil participation, a permanent search for new funds, the personal commitment of skilled human workforce, openness to change and innovation, and especially on pressure from an environmentally-aware civil society.

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## Notes

■ <sup>1</sup> Rapidel, B. et al. (eds.) 2011. *Ecosystem services from agriculture and agroforestry: measurement and payment*. Earthscan, London, Washington DC. ■ <sup>2</sup> White, D., Minang, P. 2011. *Estimating the opportunity costs of REDD+: A training manual*. Version 1.3. The World Bank, CGIAR, Carbon Finance Assist, Forest Carbon Partnership, ASB.