

Financing sustainable forest management

Recent experiences show that many countries in Latin America are already using a wide range of financing sources and mechanisms to support sustainable forest management. National financing strategies, innovation and better communication with other sectors are some of the ways that financing constraints can be overcome.

The challenge and the opportunity

Due to rising environmental awareness, international conventions and globalisation of markets, most countries now want to manage their forests more sustainably than they have in the past. However, progress is hindered by a lack of suitable financing. Many countries currently take an ad-hoc approach to financing, using a small number of mechanisms such as grants and subsidies, that often cover only a few activities. Furthermore, reliance on government budgets and overseas development assistance as funding sources remains high. To address this challenge, it is necessary to examine how to expand and diversify financing mechanisms and sources of finance.

At the same time, the contributions of forests to economic development, human well-being and the environment are increasingly recognised as important. This opportunity has been seized by some countries that are now experimenting with innovative financing mechanisms. These mechanisms may generate new sources of revenue and help to make investments in sustainable forest management more attractive and feasible.

Constraints to implementation

There are numerous constraints that limit the financing of sustainable forest management. The most important is that many of the benefits of sustainable forest management do not generate revenue for forest owners and managers. Therefore, they have no incentive to produce the full range of benefits from forests and continue to focus on production of timber and a few other marketed products. A second constraint is the complexity and generally higher costs and perceived risks of sustainable forest management compared to other land uses, including unsustainable forest practices. These economic constraints are often compounded by policy, legal and institutional constraints such as: weak institutions, a lack of policy co-ordination across sectors; unresolved land tenure issues; and weak governance, as well as a lack of technical capacity in countries.

Constraints to investment in small-scale forestry

Forest management is capital intensive and a long-term investment. This is particularly true in the case of tree planting. Incentives for tree planting are available in some countries, but access to finance from the private-sector is often constrained for the following reasons:

- forests are often not acceptable collateral for a loan (exceptions include Colombia and Uruguay);
- land cannot be used as collateral without clear land tenure;
- lending policies favour short-term loans with low risks, but a lack of information contributes to an inflated perception of risk in forestry; and
- interest rates are often higher than growth in the value of forests when timber is the only marketed output.

Constraints such as these often affect small-scale forest owners and community-based forest enterprises. In addition, administration costs are similar for large and small loans and this discourages lending to small enterprises.

This brief was prepared by Marco Boscolo and Adrian Whiteman of the Forest Policy Service of FAO, together with Herman Savenije and Kees van Dijk. It summarises the experiences and lessons learned from two projects in Latin America. These projects produced assessments of the status, experiences and prospects for financing mechanisms in 19 Latin American countries. A synthesis of these results is available in: Dijk, Kees van, and Herman Savenije. 2008. *Hacia estrategias nacionales de financiamiento para el manejo forestal sostenible en América Latina. Síntesis del Estado actual y experiencias de algunos países*. FAO Forestry Policy and Institutions Working Paper No. 21; more information can also be found at:

<http://www.fao.org/forestry/36755/es>



Forest Policy Service



Forestry Department



Sources of finance

Financing for forestry can come from various sources, including: central and local government budgets; revenue from the sale of forest products and services; private-sector investment; and overseas development assistance.

Private-sector. In most countries, the private-sector is the main source of financing for forestry and the amount of financing and diversity of investors has increased rapidly in recent years.

Currently, it is estimated that the private-sector accounts for about 80 - 90 percent of financing for forestry.

Direct investment currently accounts for most private-sector investment in forestry, but indirect investment products - such as forest and land investment trusts and funds - are increasing in importance. Funds focusing on socially responsible and green investments are another source of private-sector finance that is expanding and these funds might invest in some types of forests. In addition, the development of mechanisms for the payment of environmental services may increase the financial returns from sustainable forest management and stimulate more investment in the sector.

Public-sector. The public-sector plays an important role in financing at three levels. First, it is often the only source of finance for forestry activities that produce social and environmental benefits. Second, it can encourage private-sector investment with incentives such as grants, tax relief and subsidised loans. Finally, it is responsible for providing a policy and institutional environment that supports private-sector investment.

Several countries in Latin America have used innovative approaches to public-sector financing of forestry, including "ring-fencing" budget allocations for forestry (Guatemala); earmarking taxes for forestry (Brazil); and public-private partnerships or revenue sharing arrangements.

Overseas development assistance (ODA). ODA for forestry is an important source of finance, particularly for forest conservation, small producers, and natural forest management. For example, in recent years it accounted for about 75 percent of the funding for conservation in Brazil, 65 percent in Guatemala, 85 percent in Nicaragua and 95 percent in Bolivia.

Apart from these activities, ODA is a minor source of finance. In Guatemala, for example, ODA accounts for less than 15 percent of investment in production forests.

"Ring-fencing" budget allocations for forestry

PINFOR (Programa de Incentivos Forestales) is a program of forestry incentives in Guatemala that started in 1997. PINFOR is financed by an allocation of one percent of the national budget. Between 2000 and 2006, it provided about USD 80 million to the forestry sector, rising from USD 5.6 million in 2000 to USD 16.9 million in 2006.

Municipalities, communities, landowners and other organisations can apply for these incentives, which are used to finance reforestation, promote natural regeneration and improve natural forest management (for both production and protection). PINFOR supports the national forestry policy goal to integrate and concentrate wood production and processing in the country while also meeting conservation objectives. However, many small forest users have been excluded from the programme due to the requirement to prove land tenure or ownership.

Earmarking of government taxes for forestry

The Federal Constitution of Brazil requires states to share 25 percent of their revenue from Value Added Tax (VAT) with municipalities. Another requirement is that 75 percent of the municipalities' share is allocated in proportion to their economic output and the rest is allocated according to criteria defined by each state.

Several Brazilian states have decided to use environmental criteria in the allocation of these shares to reward municipalities that implement environmental policies or establish conservation areas and indigenous reserves. Some of these "Ecological VAT" payments have been used to fund the creation and management of forest conservation areas. VAT is the largest source of state revenue in Brazil, so these amounts are significant. For example, in recent years, average annual "Ecological VAT" payments have amounted to over BRL 50 million in Paraná and about BRL 15 million in Minas Gerais.

Promising financing opportunities for forestry

Countries in Latin America have used a wide range of financing mechanisms to encourage sustainable forest management and investment in the sector. In addition to the traditional sources of finance described above, several countries have recently been experimenting with payments for environmental services, new indirect investment products (e.g. forest-backed securities) and forest funds. Some examples of these developments are described below.

Payments for environmental services. In the past, public goods such as clean water or biodiversity have mostly been provided by regulation. More recently, payments for environmental services has emerged as financing mechanism to support the production of outputs such as these. With payments for environmental services, those that benefit from these outputs can pay forest managers and owners directly to manage their forests for the production or protection of these outputs.

In 2001, a review identified almost 300 locations around the World where payments for environmental services have been tested or implemented. This number is currently much higher. Most of the early examples of payments for environmental services occur in developed countries with advanced legal and policy frameworks, but payments for environmental services have also recently expanded rapidly in Latin America.

Most examples of payments for environmental services in Latin America are currently being implemented at a pilot scale, often with support from international agencies. However, there are high expectations that payments for environmental services will increase significantly and provide new sources of finance that can be used to implement sustainable forest management.

Most growth in payments for environmental services is expected in three main areas: payments to mitigate and adapt to climate change; payments to improve water quality through better forest management and conservation; and payments for recreational amenities.

Financing alternatives found in Latin America

Credit lines and project financing	Bank credit/loans (public and private), including micro-finance Targeted grants (public banks)
Donations, bi-lateral and multilateral aid	Loans and grants from development and multilateral agencies Debt-for-Nature swaps
Public budget funding	Subsidies Investment tax credits/exonerations Subsidized interest Payments for environmental services
Funds	Forestry funds; National environmental Funds; Conservation trust funds
Partnerships	Community-private-public partnerships Public-private partnerships
Private revenue instruments	Revenues from sale of wood and non-wood products Payment for environmental services (water, carbon, landscape beauty, biodiversity) Government revenues from taxes (wood products, water, etc.) Revenues from user fees (tourism, bio-prospecting) and concession fees (both logging and conservation concessions)
Private investment instruments	Own savings/investment capital Venture capital Capital market instruments (securitization, contracts forward) Guarantees Portfolio investors (green funds) Warrants (Certificates of deposit)
Philanthropic donations/grants	Conservation, research and development, and social grants



Governments play three critical roles in the development of payments for environmental services. First, they can provide the appropriate policy and institutional framework to support implementation.

Second, they may be important buyers of many ecosystem services. Third, they can act as catalysts for private-sector investment in such schemes.

Payments for environmental services alone may not be sufficient to encourage and promote forest conservation and management where other uses of forest land have high economic returns.

However, current evidence suggests that they can have a significant impact where they are “bundled” with other sources of financing.

Important lessons learned from the development of payments for environmental services

- Finding willing buyers is almost always the most important step in developing payments for environmental services.
- Credible and reliable governance and institutional arrangements are essential to link producers and buyers of environmental services. This is particularly true when there is little trust and understanding between them.
- With few exceptions (e.g., the voluntary carbon market), most voluntary mechanisms are small, have high transaction costs and deliver only modest improvements in conservation and rural incomes. Yet, they are effective in holding service providers accountable. They work best in small areas and where good relationships exist between service providers and beneficiaries. An example of this is Ecuador, where water companies in cities pay farmers in catchment areas for watershed conservation.
- Mechanisms with major government involvement are usually larger, can be implemented quickly, and deliver significant changes. Examples of such mechanisms include the “Ecological VAT” in Brazil and various programmes for payments for environmental services in Costa Rica.
- Mechanisms driven by regulation can generate significant funding. For example, “cap and trade” regulations on the emissions of greenhouse gases have promoted very large investments and trade in carbon credits. However, forestry activities have benefited only marginally from this regulation-driven market so far, due to the cost and complexity of procedures and limitations imposed within the regulations (e.g. reduced deforestation and improved forest management do not qualify as climate mitigation activities in the clean development mechanism at the moment).
- To implement payments for environmental services, supportive legal and institutional frameworks, clear property rights and technical assistance to small farmers and rural communities are required so that they can participate.
- Payments for environmental services are most efficient and effective when the producers, buyers and necessary management activities are clearly identified, payments are based on science, measurable improvements and where the costs of implementing improved forest and land management are low.
- National governments are currently the most important buyers of environmental services and international agencies play an important catalytic role in market development and technical assistance.

Indirect investment products. In developing countries or countries with unstable economies, traditional sources of finance (e.g. bank loans) are often not available to forest owners and managers, so indirect investment products (also known as capital market instruments) such as forest-backed securities have been developed as innovative mechanisms to raise capital for forestry activities.

Forest-backed securities in Chile

In Chile, USD 13 million of forestry bonds were recently issued, backed by a guarantee from the CORFO (Corporación de Fomento) and private-sector. These bonds have been purchased by institutional investors such as pension funds, banks and insurance agencies.

The funds raised from the bond sale have been used to purchase immature planted forests (15 - 20 years old) and pay for forest management and reforestation costs. In return, bond holders and forest owners will share the profits from harvesting operations in these forests.

Indirect investment products have several advantages compared to direct investment in the forestry sector. First, they allow forest owners and managers to raise capital while avoiding the rigidities of the banking system. Second, they can be designed to be very flexible so that they adapt to the different circumstances and conditions of investors and borrowers. Finally, the returns from investments in forests are generally stable and do not follow stock-market trends very strongly, which makes them attractive to certain types of investor.

The Brazilian Environmental and Social Stock Exchange

Just like the stock exchange is an environment where corporations can meet investors and raise investment capital in exchange for profit and dividends, Bovespa – São Paulo Stock Exchange – has launched the Environmental and Social Stock Exchange (BVS&A), an initiative that uses the same model to bring together non profit organizations that require funds and social investors willing to support their programs and projects. Over 60 projects with financing needs between BRL 30,000 and BRL 150,000 have been fully funded to date.

Most indirect investment products are based on the future earnings of commercial forest activities. Thus, they have been used to finance planted forests and processing facilities. However, many investors are now interested in the social and environmental performance of their investments as well as financial returns. This interest is leading to a number of attempts to stimulate private-sector investment in ecosystem services and social development. Examples include the creation of the Brazilian Environmental and Social Stock Exchange and the Healthy Planet Stocks to be issued by the Sierra Gorda Biosphere Reserve in Mexico.

Forest funds. Forest funds are assets held for the specific purpose of investing in forestry activities. They vary from country to country depending on the local legal system and their purpose, governance, sources of revenue and distribution mechanisms. Most forest funds finance forest conservation and protected areas, but a few focus on development of the forestry sector (e.g. El Salvador's Bono Forestal, Nicaragua's FONADEFO and

and Ecuador's PROFAFOR). Most of the money held in these funds comes from debt-for-nature swaps and international donors, but some are also funded from private contributions. In addition to providing finance, some funds play an important role in capacity building and facilitation.

Most funds support forestry activities with grants and loans, but a few pay for environmental services. Examples of forest funds in Latin America include FONAFIFO in Costa Rica, PROFONANPE in Peru, ECOFONDO in Colombia, FUNDESANP in Bolivia and PROFAFOR in Ecuador.

Forest funds require active Government support even when they are not directly controlled by the Government. Independence from Government is often associated with more transparency and may assist with raising finance from international agencies and the domestic private-sector. Multi-actor participation and transparency also improves monitoring and impact.

The Peruvian Trust Fund for National Parks and Protected Areas – PROFONANPE – was created in 1992 as a private non-profit organization to promote long term financing of the natural protected areas of Peru. It is governed by its own by-laws and enjoys independence to act and enter into contracts. It is guided by an eight-member Board of Directors that includes representatives of the public sector (four), non-governmental organizations (two), private business (one) and the international cooperation (one). The institution has supported biodiversity conservation in Peru by leveraging resources effectively. The Fund began with seed capital of \$5.2 million in 1995 and had \$95.9 million in its portfolios in 2007, an 18-fold increase. One of the organization's current challenges is to identify the impact of its work through an adequate system of monitoring and evaluation.



The way ahead (areas for priority action)

Based on some of the successes with raising finance for forestry in Latin American countries, the following actions are suggested to improve the financing of sustainable forest management.

1. Improve the investment environment. Most of the successful financing initiatives in Latin America have occurred in countries with a favourable environment for investment and market development. This enabling environment includes: good governance; supportive policies and institutions; clear land tenure; a stable macroeconomic environment; and a well-designed national forestry policy.

2. Develop national strategies for forest financing. Strategies are an agreed statement of a vision for the future of forestry in a country that prioritise and assess the needs and requirements to reach that vision. Many countries have such strategies in their national forest programmes, but have difficulties with raising finance for implementation. Experiences from Latin America suggest that implementation can be improved when national forest programmes are supported by financing strategies that:

- are based on negotiation and agreement amongst all major stakeholders in countries (including representatives of the financial sector);
- promote diversification in and synergies across financing sources and mechanisms, responding to the variety of forest management conditions and needs of different forest users ;
- ensure that a supportive institutional, legal and socio-economic environment for investment and market development is in place; and
- include the multiple benefits of forests as management objectives in appropriate locations and circumstances.

National governments have a leading and decisive role in the creation of an enabling environment and the provision of public finance, so long-term government commitment to the forestry sector is essential.

3. Build national capacity. Countries need to help all stakeholders to think, plan, and act strategically about financing in order to harmonise the use of public and private finance for the achievement of a common and shared vision for the sector and reduce dependency on overseas development assistance. Stakeholders also need to be more effective in promoting the importance and value of healthy forests and become more skilled at negotiating with other sectors (e.g. the finance sector). They also need to be more flexible, adaptable and able to find innovative solutions to financing problems and take advantage of emerging opportunities such as carbon finance and new indirect investment products.

FAO has developed a set of tools and training materials to help countries with this, based on the experiences from Latin America.

How to improve the environment for investments and market development

Actions within the forest sector

- Clarify land tenure issues;
- Support the involvement of private sector and civil society organizations in policy dialogue and sector development;
- Increase availability of and access to forest sector information (e.g., market, productivity, legislation, institutional functioning, etc.) in order to enable all actors to make better decisions;
- Ensure that legislation encourages the development and use of market mechanisms including payments for environmental services such as water, carbon, biodiversity and landscape beauty;
- Streamline forest regulations

4. Improve communication. The future of forests is increasingly being shaped by forces outside the forestry sector. At the same time, many forestry administrations tend to focus on enforcement of regulations and direct management of forest resources. Increasingly, this type of approach is inappropriate, as people now expect forestry administrations to play more of a facilitating role.

The above trends require greater communication and collaboration across different sectors of the economy and between the public and private sectors and civil society. Evidence is emerging that innovative solutions to the problem of forest financing can be found when stakeholders in the forestry sector reach out of their traditional networks and explore partnerships with other sectors (e.g. the financial sector).

5. Support financial innovation. Many successful financing initiatives have benefited from domestic and international support in their start-up phases. This is true for both the development of payments for environmental services (e.g. support from the Global Environmental Facility in Costa Rica) and the development of new investment products (e.g. the bond guarantees from CORFO in Chile). This support is often needed, even when these activities are economically viable in the medium-term, because the initial costs of developing such markets are usually quite high.

6. Promote knowledge sharing and information exchange. Knowing how to raise finance for sustainable forest management is of great interest to all stakeholders in the forestry sector and improving knowledge and the exchange of information within and between countries can help countries to learn from each other about successful financing initiatives. FAO has been helping countries to improve their knowledge about financing mechanisms by:

- facilitating links between national experiences and regional and international processes;
- supporting regional communities of practice with established mechanisms of exchange of experience and information; and
- supporting a global platform for knowledge sharing and development.

Actions across sectors

- Clarify overlapping and confusing public sector jurisdictions;
- Seek support for forest development at the highest level;
- Through participation, seek inclusion of forest considerations in the development of agriculture, banking, infrastructure, fiscal, investment and trade policies, among others;

Actions beyond sectors

- Consider public incentives (and the removal of disincentives) for activities of high development impact;
- Clarify and better communicate the role of forests in sustainable development;
- Enhance business development services, social facilitation and rural infrastructure (such as telecommunications, education and roads);
- Establish a policy framework conducive to microfinance and strengthen microfinance institutions so as to broaden the choice of financing options offered.

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