



# Economic Incentives for SFM and Landscape Restoration

## A Workshop Summary

*Forests are lost because conservation and sustainable management is less profitable than deforestation, at least in the short-term. Payments for environmental services - such as watershed management, carbon storage, and biodiversity conservation - can alter this equation and make standing forests more profitable. Various mechanisms to generate payments for such services are emerging, from public payment systems to user rights and new trading schemes. Several cases of practical experience with payments for environmental services now exist and provide insights as to how such markets might function.*

### CONTENTS

Global Forest Trends: An Overview.....	1
Forest Landscape Restoration.....	2
Capturing the Value of Environ- mental Services.....	2
Experiences with Payments for Environmental Services.....	4
Characteristics of Markets for Environmental Services.....	6
What is the Government's Role?.....	6
Tools for Valuation of Forest Services.....	6
New Directions for Colombia....	7
Resources for Additional Information.....	8

In this context, some 140 participants representing local, regional and national governmental authorities, international organizations, conservation NGOs, bilateral donor agencies, academia, and the private sector gathered in Bogotá, Colombia, from January 28-30 to participate in a three-day workshop on incentives for sustainable forest management (SFM) and forest landscape restoration. The workshop also served to inform the preparation of a new forest law for Colombia.

Workshop participants shared knowledge and experiences with payments for environmental services and other incentives for SFM and forest landscape restoration through presentations and discussion on related case studies in Colombia and elsewhere in Latin America. More specifically, the workshop considered how to derive value from forest ecosystem services; mechanisms for obtaining payments for environmental services; the

underlying concepts of forest landscape restoration; methodologies for economic valuation of forests; and the role of governments in promoting incentives for SFM.

### Global Forest Trends: An Overview

The last decade has seen several transformations in the forest sector, with changes in the structure of industry, forest product markets, and forest ownership and governance. Forest protected areas have increased more than ten fold in the last fifty years and global forest protected areas now amount to more than 1 billion hectares of forest. However, many of these protected areas do not receive adequate funding for their management. As a result, illegal activities are carried out in many protected areas.

Within the timber industry there is a tremendous shift to production in tropical and sub-tropical countries driven by plantations.

## INCENTIVES FOR SFM

There are a number of obstacles that can impede SFM, such as institutional, legal, political and macroeconomic instability, unclear land tenure, illegal logging, insufficient infrastructure, more profitable land use alternatives, limited market access for forest products, excessive bureaucracy in the forest sector, and lack of access to financing. The following are some incentives to help overcome these obstacles and foster SFM:

- Fiscal incentives for SFM include appropriate levels of taxes, tariffs, subsidies, and accelerated depreciation rates for equipment and machinery to encourage good management practices and responsible investment.
- Financial incentives include investment funds, compensation for certain investments, payments or premiums, tradable permits or licenses, and deferred or conditional payments.
- Incentives for private forests and plantations could include exemption from agrarian reforms, absolute land rights, reimbursement for certain investments, and access to low interest loans.
- For forest concessions, SFM can be encouraged by long-term rights of 40 years or more (subject to performance standards), the capacity to sublease, reimbursement for certain investments, and tax incentives.

Plantations now constitute 35% of global timber production and projections suggest that by 2020, 50% of timber may come from plantations. Conventional wisdom holds that plantations will take the pressure off of natural forests. However, another possibility some fear is that plantations will out compete natural forests, making natural forests less valuable. This would increase the economic incentive to convert natural forests for other uses such as agriculture, and push small-scale, indigenous, and low-income producers out of the market.

Forest industry consolidation is another strong trend. Today only 10 companies are responsible for processing roughly 20% of the world's wood production and the top 100 companies process 50% of the world's industrial wood. Perhaps the most important trend in forest usage is China's growing demand for timber and timber imports. China is expected to dominate global timber markets in the next two decades.

Across the globe there is a clear shift from a strict regulatory command and control approach to market-based incentives, transparency and greater participation of civil society and other stakeholders. Who owns and manages the global forest estate is also changing. Local ownership and control over forests is on the rise. At present, 25% of tropical forests are managed by local communities and this figure could double in the next 15 years.

A new set of environmental services are entering the market, shifting the way we view, value and manage our forest resources. The examples of environmental services yielding improved profits are increasing. Payment for maintenance of water flows and quality has created local markets in several places. Additionally, there is significant potential for forest carbon markets to grow.

A recent analysis by Forest Trends suggests that in some cases these environmental services will produce more value than traditional timber, and in most cases these environmental services will add significant additional revenue to well managed timber operations. However, effective markets must be established to capture this potential. To this end, there are a number of basic pre-conditions that make markets for environmental services possible:

- First, environmental services must be clearly defined to create a product or service of value to a buyer;

- Second, ownership of environmental goods and services must be defined in a manner that fosters market confidence;
- Third, governments have a role in protecting and encouraging nascent markets;
- Fourth, to meet the goal of poverty reduction, small producers must have access to market opportunities.

## Forest Landscape Restoration

Forest landscape restoration is an approach to land use management that is complementary to and allied with payments for environmental services. Forest landscape restoration brings people together to identify and put in place a mix of land-use practices that will help restore the functions of forests across a whole landscape to deliver the goods and services that people and societies need. A restored forest landscape might consist of areas that are protected for biodiversity conservation and watershed management, as well as productive use areas such as sustainably managed forests and farm lands, with the potential for generating payments for environmental services, and other innovative sources of funding such as creation of alternative livelihoods.

Forest landscape restoration is not the reestablishment of pristine forests, but rather the restoration of forest functions and the building of assets for the future. Restoration activities include planted forests for timber and fuelwood, conservation areas, natural regeneration, agroforestry and on farm trees. Benefits from restoration can include revenue generation, alternative livelihood sources, biodiversity conservation, job creation, soil maintenance, watershed protection, and the establishment of recreation and tourism opportunities. An example of such benefits is in Chiapas, Mexico, where planted forests contribute to livelihoods through fruit, medical plants and fuelwood, as well as the selling of carbon offsets (worth US\$180,000 in 2002).

Forest landscape restoration is also aligned with several multilateral environmental agreements and bodies, including the Convention on Biological Diversity, International Tropical Timber Organization (Restoration Guidelines), the UN Framework Convention on Climate Change and the Kyoto Protocol, and the United Nations Forum on Forests. The Global Partnership on Forest

## FORESTS AND THE CDM

With the Kyoto Protocol yet to enter into force, the market for certified emission reductions (CERs) remains unclear. At present, the main market opportunities that exist for CERs are in Japan, Canada and niche markets in the US. In December 2003, Parties to the Framework Convention on Climate Change reached agreement on the modalities for including afforestation and reforestation activities in the Kyoto Protocol's Clean Development Mechanism (CDM). Most notably, negotiators dealt with the issue of the permanence of CERs from forests by requiring five yearly verification that carbon remains sequestered. They also agreed to create two types of CERs for forest projects, either temporary certified emission reductions (tCERs) valid for a five-year period, or long-term CERs (lCERs) valid for a twenty-year period, with both types of CERs eligible for renewal for up to 60 years. At present, the European carbon exchange does not plan to trade CERs from forests. However, this could change in the future.

Landscape Restoration, comprised of some 20 international organizations, governments, and NGOs, aims to link local action to implementation of international commitments. In early 2005, the partnership will host a major workshop on restoration.

## Capturing the Value of Environmental Services

The characteristics of markets for forest environmental services vary depending on the service provided. The following describes market characteristics for water, carbon sequestration, and biodiversity conservation.

### WATER

Forests can influence the quantity and quality of water flow, and thus provide extremely valuable services for water consumers, irrigation systems, hydroelectric power generation facilities, fisheries maintenance, and more. In the past, such services have either not been valued, or largely undervalued.

In most cases, markets for water services tend to be localized. In the short-run, payments for water-related services are likely to be specific one-off deals whereby specific users pay specific producers for water-related services of a specific forest. The potential for such payments is good in locations where there is high demand for water resource and the benefits to the buyers of the service are clear. In the long-run, the process will probably mean creating broader markets for such services.

In general, there are four stages to designing and implementing a system of payments for water services:

1. Identify and quantify water services: Which services are generated in a given location? How much is the service worth?
2. Identify key beneficiaries and charge them for water services: Who should pay? What fee? How should the funds yielded be managed?
3. Develop payment systems that work: How are payments to be made to achieve the desired change in land use sustainability?
4. Address political economy and institutional issues: Who are the winners and losers, and how can the resulting political economy implications be addressed? What

institutional preconditions make the payments possible?

### CARBON

The market for forest carbon fixing and green house gas mitigation services is global, with demand driven by the Kyoto Protocol, national emission reduction policies, and the opportunities for individual offset purchases. This market is developing rapidly and multimillion dollar deals have been negotiated for the provision of carbon sequestration or carbon emission reductions (CERs).

The global nature of the market has both advantages and disadvantages. On the one hand, carbon-related services provided in very remote rural areas can be sold to buyers in large, urban, and highly-developed markets. On the other hand, the global nature of the carbon markets can put small holders at a significant disadvantage as buyers can take their business to places where transaction costs, country risks, and prices are lower. Given this, some level of intermediation is essential to enable small landholders living in remote rural areas, where most forests and opportunities for forest restoration are located, to participate in such markets.

The World Bank has served such a role through its various carbon funds. The latest of these funds, the BioCarbon Fund (BCF), will soon be operational, and through a "learning by doing" approach will help to identify how land use, land-use change and forestry activities can generate high-quality CERs with environmental and livelihood benefits that can be measured, monitored and certified.

### BIODIVERSITY

In the case of biodiversity conservation, the market is somewhere between local and global, making the identification of beneficiaries willing to pay for the services extremely difficult. At present, buyers of this environmental service include bilateral donor agencies, the Global Environment Facility, and NGOs such as Conservation International (CI). However, the resources available through this pool of buyers falls short of the funds needed to finance biodiversity conservation.

# Experiences and Lessons Learned with Payments for Environmental Services and Forest Landscape Restoration

## MEXICO'S FOREST FUND

In Mexico, forest conversion for agriculture and cattle grazing has resulted in the second fastest deforestation rate in Latin America and the sixth deforestation rate globally. Investment in the forest sector is severely limited by the lack of access to financial resources; industrial forests only receive 1.5% of the value of the sector.

In July 2003, a forest fund was established to promote the conservation, sustainable use and restoration of forests, and the development of mechanisms for payments for environmental services. The fund aims to reduce both poverty and deforestation. So far, the fund has initiated payments for hydrological services.

Forest lands that are located in areas that supply water to more than 5,000 people, and that do not exceed an area of 4,000 hectares are eligible for such payments. Contracts have been issued for a period of five years with the possibility of being renewed. Service providers are paid annually based on results verified through inventories from satellite imagery. Obligations of the service providers include maintaining the land use, prohibiting deforestation or deterioration, supporting monitoring and evaluation, and reporting any noncompliance.

To date, 126,818 hectares are included in the program, with annual payments of approximately \$350 Mexican pesos (US\$38 ) per hectare. In 2004, one aim for the fund is to include 150,000 more hectares in payments for hydrological services, benefiting some 30,000 inhabitants in forest areas. There also plans to use the fund to develop markets for biodiversity conservation and carbon sequestration. By 2006, the goal is to have 600,000 hectares receiving payments for environmental services.

## A WATER FUND FOR QUITO

In 2000, a water fund was established to protect Quito's water supply from the Condor Bioreserve. The Nature Conservancy and the Quito Municipal Sewage and Water Agency (EMAAP-Q) financed the initial costs of establishing the fund. To date, the fund has received US\$1,450,000 from contributions made on a regular basis from the potable water company (1% of monthly water sales), the energy company (US\$135,000 per year), and the Andean brewery company (US\$6,000 per year). The fund has financed projects related to clarification of land rights, valuation of environmental services, sustainable production systems, education and training, supervision and control, and monitoring and follow-up activities.

A number of lessons were learned in establishing Quito's water fund. First, it is important to be clear that payments are for water protection, not water consumption. Second, from one market location to the next, the socioeconomic context and thus the costs and benefits of water services, who provides them and who is willing to pay for them and how much, will vary. Third, water is a political topic, and the view that water is a 'right' must be broadened so that it is also seen as a 'good' that must be paid for. As the Quito case demonstrates, there is a willingness to pay for water services. Fourth, payments for water services can raise awareness and help contribute to institution building for environmental management. Fifth, payments for such environmental services should be promoted as a source of income for rural communities, but the potential impact of such payments on communities should be considered.

## INTEGRATED SILVOPASTORAL LAND USE

An integrated approach to silvopastoral land management provides an opportunity for farmers to diversify their income through provision of environmental services such as biodiversity conservation, watershed management and carbon sequestration. The "Bundling" of these different services can yield adequate incentive and funding for land use change.

A network of partners, including the International Center for Tropical Agriculture (CIAT), the Center for Research on Sustainable Agriculture Production Systems (CIPAV), and the Tropical Agricultural and Higher Education Center (CATIE), is working to develop incentives to encourage the adoption of such systems in Colombia, Costa Rica and Nicaragua.

In Colombia, a project for integrated land management is underway in Valle del Cauca and Quindío in the La Vieja river basin. Payments for carbon sequestration and biodiversity conservation have been offered to interested farmers. Payments are then issued to farmers based on results verified through satellite monitoring, and also through changes in biodiversity assessed by indicators such as bird populations. The project also includes empowerment and capacity building, training, technical assistance, environmental education, and youth involvement to encourage long-term adoption of the approach.



**COLOMBIA'S GREEN PLAN**

The Green Plan was developed to address degradation and loss of ecosystems and biodiversity as a result of deforestation, desertification and encroachment from agriculture and illegal crops on forest lands. Funded by the Inter-American Development Bank, the plan supported regeneration of critical degraded forests to provide hydrological services for municipalities. The plan has established 70,218 hectares of forests, created 18,102 jobs, and improved the livelihood of some 33,000 families.

The plan's success is largely credited to broad participation in project planning and implementation. Local communities, NGOs, regional environmental authorities, departments and a municipality both implemented and (in part) funded the project, increasing the sense of ownership and commitment to the project. A monitoring and evaluation process is in place, however, quantifying the qualitative social and environmental benefits is a challenge. Lessons from the Green Plan include that the following are key to success: stakeholder involvement in the design of incentives; a clear idea of the land-use objectives to be achieved; cross-sectoral cooperation; and monitoring of incentives' effectiveness.

**PROCUENCA PROJECT: WATERSHED RESTORATION AND ASSESSMENT OF THE POTENTIAL FOR FOREST FINANCE THROUGH THE KYOTO PROTOCOL'S CLEAN DEVELOPMENT MECHANISM**

Manizales, a city in the Rio Chinchina basin in western Colombia, initiated the ProCuenca Project to reforest and restore the watershed through diverse funding sources, including a local water-use fee. The project encompasses land under various uses, including coffee, potato and cattle production, and aims to create a biological corridor to connect fragmented forests in productive use areas. Restoration, reforestation, water flow regulation, biodiversity conservation, and employment are benefits of the project.

An assessment was carried out to determine the project's potential to generate additional income from carbon fixing services. Using computer modeling, various scenarios for establishing biological corridors and the associated potential to generate CERs were mapped out. The findings from the assessment were that while the project meets the eligibility and additionality requirements of the CDM, a CDM project in reforestation is not financially viable at present. For the project to pay off, the price for CERs must be US\$7 or more, (assuming interest rates of 10%).

In the next ten years, ProCuenca is expected to plant some 15,000 hectares of forest with a carbon capture of more than 4.6 gigatons. The scale of the project will most likely yield lower transaction costs, making it more cost effective.

**COLOMBIA'S FORESTRY INCENTIVE CERTIFICATES (FIC): THE RIO MAGDALENA FOREST PROGRAM**

Since 1993, the Rio Magdalena forest program has been implementing FIC and other incentives for forest restoration and protection. The program, funded by the German government and implemented by the National Federation of Coffee Growers of Colombia (FEDERA-CAFE), was developed to address erosion, decreased quantity and quality of water, and decreasing access to wood.

Landholders participating in the FIC were given five year contracts to plant forests. In the first year of the contract they received 75% of the costs for planting native tree species and 50% of the cost for non-native species. In the subsequent years they received 50% of the cost of maintaining these trees. As of December 31, 2003, the program had established 11,559 hectares of forest, increased the profitability of agroforestry systems by between 7.4 and 19.8 percent, and generated more than 4,000 jobs.

The incentive also helped to change perceptions about the value of forests and to promote SFM as a long-term source of income. The project's success can be attributed to an attractive incentive, guaranteed over time, that effectively engaged interest and participation. Technical assistance, follow-up and monitoring also contributed to the successful outcomes.

**CREATION OF A BIOLOGICAL CORRIDOR BETWEEN BARBAS AND BREMEN**

The Alexander von Humboldt Institute is working to establish a biological corridor between the Barbas and Bremen forests in Quindío, Colombia. The Barbas and Bremen forests are areas rich in biodiversity, including 199 bird species, more than 400 types of trees and shrubs and endangered species. They are the water source for eight municipalities. The establishment of the biological corridor is part of the Institute's ongoing effort to develop tools to improve biodiversity conservation in productive forest areas. Actors involved in the project include regional environmental authorities, the local community and municipal government of Filandia, wood companies, and farm owners.

So far, the area of the corridor has been demarcated and closed off, and native tree species that meet conservation needs are being regenerated to restore the deforested areas. Agreements have been developed between regional institutions with regard to generating information and helping to develop conservation tools. To strengthen local community participation in the project, a communication strategy was put in place to inform local populations about the benefits and purpose of the project. In the future, the Institute hopes to establish a new protected area including Bremen, Barbas and Cestillal. It is also working to establish management tools for watersheds and to monitor the impact of biological corridors.

## TRADING SO<sub>2</sub> IN THE US

In 1990, the US government amended its Clean Air Act, creating a market in sulfur dioxide (SO<sub>2</sub>), one of the world's first environmental markets. The law set out that by 2010 the US would reduce emissions of sulfur dioxide to 10 million tons below 1980 levels, and required SO<sub>2</sub> emitters to have permits for each ton of SO<sub>2</sub> they released into the atmosphere. Tradable permits were issued to large-scale emitters based on historic emissions, creating a new form of property right, and a market was born.

The US SO<sub>2</sub> market highlights the roles of governments and markets in addressing environmental problems. The government regulated a public good, set limits on its use, and generated the property rights that enabled a market to work. The market then allocated the ability to emit efficiently and determined the lowest price at which the desired emissions reductions could be achieved. A similar process is underway with the creation of global carbon markets as a result of the Kyoto Protocol.

## Characteristics of Markets for Environmental Services

Beyond one-off deals for the payment of forest environmental services, the buying and selling of these services can become a national, sub-national, or global market. Markets can be described as regular meetings between sellers and buyers of goods and services, wherein regularity of the meetings is essential. The provision of carbon sequestration and regulation is already becoming such a market.

To date, there are three types of environmental markets: a market of rights such as the “cap-and-trade” markets (e.g. the global carbon emissions market and the US SO<sub>2</sub> emissions market); a market of responsibility wherein an environmental objective is determined by government and tradable responsibilities for meeting that objective are allocated to all relevant actors (e.g. the market for tradable renewable energy credits in Texas); and a market for environmental risk (such a market does not yet exist, although the weather derivatives market may be indicative of things to come).

Given that one can only sell that which is owned, property rights protected by a strong governance structure and established legal institutions are necessary for markets to function effectively. Market confidence, competition, transparent information (on players, prices, bids, offers, goods and services) are fundamental to market operation.

How to distribute rights is a key question in the creation of any environmental market: should they be given to the existing users (or “grandfathered”), as was done with the SO<sub>2</sub> market in the US?; or distributed to society on a more equitable basis? Additionally, secondary effects such as increased costs of goods and services to consumers (e.g. for water, electricity, housing and paper) must be considered to avoid undesirable or unforeseen outcomes.

## What is the Government's Role?

In general, the government's role in the forest sector is to regulate the use and management of forest resources. To encourage SFM, governments can provide services such as awareness raising about criteria and indicators for SFM, technical assistance, research and extension services, and the sharing of knowledge and information related to SFM. By

providing a sound legal and institutional structure, governments can encourage long-term private sector investment, assure financing opportunities for responsible commercial operations, and create an atmosphere of confidence conducive to the development of markets for environmental services.

Non-governmental stakeholders, including industry, financial institutions, NGOs, academia, and media, are increasingly influencing policy making. Governments can encourage stakeholder participation in SFM by providing consultative mechanisms. Stakeholder participation could also help governments address issues such as illegal logging, through implementation of local forest management solutions and partnerships to monitor and combat illegal logging.

Governments can also foster intersectoral cooperation for land-use planning through the establishment of intersectoral institutions or other mechanisms. In countries where forest management has been decentralized, the various levels of government must coordinate SFM between the local and national levels.

Unfortunately, people in forest areas are often marginalized and do not receive adequate services from the government in support of SFM. Additionally, in some instances, policies and incentives intended to promote SFM are not used, indicating problems with their design. To avoid such ineffective measures, incentives must be evaluated and reviewed for their effectiveness on an ongoing basis.

## Tools for Valuation of Forest Services

The collective value of multiple forest services and uses, such as ecotourism, water management, pharmaceutical products, food products and recreation, can make a strong argument for SFM and raise awareness of the costs of deforestation. However, the value of these services must first be articulated. To this end, there is a need to develop institutional and technical capacity for valuation.

IUCN's South America office recently published “Tools for the Economic Valuation for SFM” to help raise awareness of valuation methodologies, and economic, social, institutional and regulatory incentives for SFM. The publication outlines how valuation methods can be used to design appropriate incentives for SFM tailored to local conditions and political circumstances.

## CONSERVATION CONCESSIONS

Conservation concessions pay forest owners a fee to compensate for potential earnings from uses other than conservation. In economic terms, they are a way of internalizing the conservation value of forests.

Conservation International (CI) is currently piloting conservation concessions in several countries: Bolivia, Ecuador, Peru, Mexico, Solomon Islands, and Papua New Guinea. Such agreements are generally long-term with periodic evaluation to guarantee that the conservation service is being provided. For example, in Peru, CI holds 40-year conservation concession agreements that are evaluated every five years and renewed if they are in compliance.

Conservation concessions are more rapid than PAs, and yield greater accountability because payments are results based. They provide a direct way to put a real value on the goods and services provided by forests.

## New Directions for Colombia

Based on the presentations and discussions at the workshop, participants developed a number of recommendations for Colombia's ongoing forest law revision process. Overall, the importance of coordinating policies and laws for land use planning across sectors was emphasized along with the need for monitoring to inform and improve policy and management decisions.

Recommendations put forward relate to forest restoration, sustainable management and conservation of natural forests, payments for environmental services, and economic and non-economic incentives for SFM. These recommendations were shared with the Colombian Government as input to the forest law reform process.

### RECOMMENDATIONS

- Assure forest legislation is compatible with national laws on land use, ownership and planning;
- Align policies in other sectors which impact forests with national, regional and local forest policy objectives;
- Conduct the forest law revision process in a transparent and participatory manner with stakeholder consultations over a period of between six and twelve months, and involve stakeholders in formulating, implementing and follow up on the forest law;
- Promote awareness of experiences with forest valuation, payments for environmental services and market creation, as well as of their potential to improve rural populations' well-being and to internalize the cost of SFM;
- Increase national and regional initiatives and incentives for forest landscape or ecosystem restoration as such measures are essential to enable payments for environmental services;
- Promote the replication of successful national and regional experiences with forest landscape restoration in degraded areas to restore environmental services;
- Incorporate follow-up and evaluation processes into policy instruments, risk management, and decision making processes;

- Evaluate the inconsistencies, contradictions and complementarities of existing forest-related incentives;
- Assure long-term financing for existing economic incentives such as the FIC;
- Assess the demand for environmental services and develop procedures and institutions to foster confidence in such markets;
- Create an atmosphere of confidence to encourage the development of markets for environmental services wherein transactions are reliable, and the quality of services provided can be verified;
- Incorporate the concept of payments for environmental services and development of markets for such services into the law;
- Develop mechanisms to make markets accessible and to provide transparent and accessible market information;
- Incorporate the concept of forest landscape restoration and incentives for restoration activities into the law, and promote understanding and awareness of its benefits; and
- Strengthen education, awareness raising, research, and technical assistance, especially for small holders.

## ACKNOWLEDGMENTS

The workshop on Economic Incentives for SFM and Land Restoration was organized by the Colombian Ministry of Environment, Housing and Development (MAVDT), Conservation International-Colombia, Forest Trends, IUCN and PROFOR, with funding from PROFOR. This briefing note was written by Laura Ivers (PROFOR) based on presentations and discussions that took place at the workshop. Acknowledgements are due to (in alphabetical order): Angela Andrade (CI-Colombia, and Vice Chair of the IUCN Ecosystem Management Commission), Fabio Arjona (CI-Colombia), Ricardo Bayon (Katoomba Group), Thomas Black (CAEMA), Jill Blockhus (PROFOR), Ignacio Bustos (FAO), David Camargo (CI-Colombia), Ramón Carrillo (PROCYMAF), David Cassells (World Bank), Marta Echavarría (EcoDecisión), Rubén Guerrero (MAVDT), Rubén Guevara (ITTO), Víctor Gutiérrez (Carbono y Bosques), Raúl Jaime Hernández (Federacafé) Michael Jenkins (Forest Trends), Fabio Lozano (Alexander von Humboldt Institute), Alvaro Luna (IUCN), Gommert Mes (FONAFIFO), Gunars Platais (World Bank), Dick Rice (CI), Stefano Pagiola (World Bank), Carol Reed (World Bank), Carole Saint-Laurent (IUCN), Nicolás Zea (Colombia's National Forest Plan), and Patricia Zurita (CI).

The workshop agenda, presentations, participants list and follow-up updates are available at: <http://www.conservation.org.co>

## Resources for Additional Information

### PUBLICATIONS

- Bayon, Ricardo. "Making Environmental Markets Work." 2003. Paper produced for Forest Trends. <http://www.forest-trends.org>
- McMillian, John. 2003. *Reinventing the Bazaar: A Natural History of Markets*. New York, New York: Norton.
- Izko, Xavier and Diego Burneo. 2003. *Tools for the Economic Valuation for Sustainable Forest Management*. Quito, Ecuador: IUCN
- Pagiola, Stefano, Joshua Bishop and Natasha Landell-Mills. 2002. *Selling Payments for Environmental Services: Market-based Mechanisms for Conservation and Development*. London: Earthscan.
- Andy White and Alejandra Martin. 2002. "Who Owns the World's Forests?" [http://www.forest-trends.org/resources/pdf/tenurereport\\_whoowns.pdf](http://www.forest-trends.org/resources/pdf/tenurereport_whoowns.pdf)
- United States Environmental Protection Agency. November 1999. "Progress Report on the EPA Acid Rain Program." <http://www.epa.gov/airmarkets/progress/arpreport/acidrainprogress.pdf>.
- Costa Rica's National Forest Fund: <http://www.fonafifo.com/paginas/fonafifo.htm>
- Forest Trends: <http://www.forest-trends.org>
- Food and Agriculture Organization Forestry Department: <http://www.fao.org/forestry>
- Global Partnership on Forest Landscape Restoration: <http://www.unep-wcmc.org/forest/restoration/globalpartnership>
- IUCN: <http://www.iucn.org>
- ITTO: <http://www.itto.or.jp>
- Katoomba Group: <http://www.katoombagroup.org>
- Mesoamericano Biological Corridor: <http://www.biomeso.net>
- Mexico's Project for the Conservation and Sustainable Management of Forest Resources: [http://www.conafor.gob.mx/programas\\_nacionales\\_forestales/procymaf/](http://www.conafor.gob.mx/programas_nacionales_forestales/procymaf/)
- Program on Forests (PROFOR): <http://www.profor.info>
- World Bank Group Forests and Forestry <http://www.worldbank.org/forests>

### INTERNET RESOURCES

- Alexander von Humboldt Institute: <http://www.humboldt.org.co>
- Asocars (La Asociación de Corporaciones Autónomas Regionales de Desarrollo Sostenible): <http://www.asocars.org.co>
- Carbon Finance at the World Bank: <http://www.carbonfinance.org>
- CATIE - Tropical Agriculture Research and Higher Education Center: <http://www.catie.ac.cr>
- Center for International Forestry Research (CIFOR): <http://www.cifor.org>
- CIPAV Foundation: <http://www.cipav.org.co>
- CI-Colombia: <http://www.conservation.org.co>
- Colombian Ministry of Environment, Housing and Development (MAVDT): <http://www.minambiente.gov.co>
- Conservation International (CI): <http://www.conservation.org>