

# CONSERVATION FINANCE FOR INDIGENOUS RESERVES IN ECUADOR: OBSTACLES TO AND OPPORTUNITIES FOR SUSTAINABILITY

**JANUARY 2006**

This publication was produced for review by the United States Agency for International Development. It was prepared by Chemonics International Inc.



# CONSERVATION FINANCE FOR INDIGENOUS RESERVES IN ECUADOR: OBSTACLES TO AND OPPORTUNITIES FOR SUSTAINABILITY

Contract No. LAG-I-00-99-00014-00; Task Order No. 817  
Report by: Dave Gibson

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.



# CONTENTS

<b>ACKNOWLEDGEMENTS</b> .....	<b>VII</b>
<b>ACRONYMS</b> .....	<b>IX</b>
<b>EXECUTIVE SUMMARY</b> .....	<b>1</b>
Current Conservation-Finance Conditions .....	1
Consolidation Is Working but Needs Time and Financial Support .....	2
Financial Instruments and Key Features for Indigenous-Reserve Finance .....	2
Environmental-Finance Market Segments, Phasing, and Targets .....	4
Primary Recommendations for Work-plan Consideration .....	4
<b>I. ASSESSMENT BACKGROUND AND OBJECTIVES</b> .....	<b>7</b>
Sustainable Finance in Caiman .....	8
The Challenge to CAIMAN.....	12
Assessment Objectives and Methodology .....	12
<b>II. CONSERVATION-FINANCE CONDITIONS AND OPTIONS</b> .....	<b>15</b>
Conservation Funds.....	16
Offsets .....	18
Land Trusts, Conservancy and Conservation Easements .....	22
<b>III. PROSPECTUS DEVELOPMENT AND LIKELY TARGETS</b> .....	<b>27</b>
Development of Investment Prospectus .....	27
Potential-investor Typology .....	29
Commercial Options for Funding .....	30
<b>IV. CONCLUSIONS AND RECOMMENDATIONS</b> .....	<b>33</b>
Experience and Meeting Critical Conditions.....	33
Prior Fund Experience .....	34
NGO Investments to Date.....	34

Corporate Investment in Conservation.....	35
Recommendations .....	35
<b>ANNEX A: CONTACT LIST .....</b>	<b>43</b>
<b>ANNEX B: SCOPE OF WORK.....</b>	<b>45</b>

# ACKNOWLEDGEMENTS

The support and enthusiasm of indigenous communities, conservation leaders, and other stakeholders was truly remarkable and greatly appreciated. The candid exchange of concerns and solutions was essential and inspiring to this work and we hope it has been accurately recorded here. The CAIMAN staff, USAID, and all of the project's partners deserve special recognition for their important work. We particularly thank the members of the Waorani Women's Association who shared a glimpse of their world and reminded the author how essential cultural and environmental conservation is to a healthy planet.



# ACRONYMS

BMZ	German Federal Ministry for Economic Cooperation and Development
CAIMAN	Biodiversity Conservation in Indigenous Communities
CEDA	Ecuadorian Center for Environmental Rights
CEFOVE	Ecuadorian working group for FSC Forest Certification
CI	Conservation International
DCA	Development Credit Authority
ECOFONDO	Ecofund
ECORAE	El Desarrollo Sustentable de la Región Amazónica Ecuatoriana
EEQ	Empresa Eléctrica de Quito
EAI	Enterprise for the Americas Initiative
ELI	Environmental Law Institute
EMAAP-Q	Empresa Metropolitana de Alcantarillado y Agua Potable de Quito
EU	European Union
FAN	National Environmental Fund
FAP	Protected Areas Fund
FCAE	Federación de Centros Awa del Ecuador
FEINCE	Federación Indígena de la Nacionalidad Cofán del Ecuador
FONAG	National Water Fund (Fondo para la Conservación del Agua)
FSC	Forest Stewardship Council
FUNAN	Fundación Antisana
TLC/FTA	Free Trade Agreement
GDA	Global Development Alliance
GEF	Global Environment Facility

GIS	Global information system
IMF	International Monetary Fund
ITTO	International Tropical Timber Organization
IUCN	World Conservation Union
MOE	Ministry of Environment
NGO	Nongovernmental organization
OCP	Oleoducto de Crudos Pesados
ONHAE	Organización de Nacionalidades Huaorani de la Amazonía Ecuatoriana
PROFAFOR	FACE Program for Forestation in Ecuador S.A.
SNTCF	National Forest Control System
TFCA	Tropical Forest Conservation Act
TNC	The Nature Conservancy
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WB	World Bank
WCS	Wildlife Conservation Society

# EXECUTIVE SUMMARY

The USAID-funded Biodiversity Conservation in Indigenous Communities (CAIMAN) project supported an external review of sustainable finance options for activities in indigenous reserves, which protect more than half of Ecuador's biodiversity. Over a 10-day period, the team reviewed local and international conservation-finance progress, interviewed individuals and organizations key to indigenous conservation in Ecuador and elsewhere, and conducted field visits to indigenous territories in the Amazon region. The report provides an overview of CAIMAN's important contributions, reviews the current condition of conservation finance in Ecuador, isolates enabling conditions for further consideration, and identifies methods and targets for attracting finance for conservation activities in selected indigenous communities.

## CURRENT CONSERVATION-FINANCE CONDITIONS

Despite significant investment over protracted periods from a variety of public and multilateral sources, there is a surprising dearth of experience in conservation finance in Ecuador. No international conservation organizations have made substantial investments in sustainable-financing mechanisms for Ecuador's protected areas. Several organizations are currently considering different types of investments but none have yet moved beyond project financing. There is only one bona fide revolving endowment for protected areas — the National Water Fund (Fondo para la Conservación del Agua, or FONAG), based on water revenues in Quito — which generates only a limited basis for project finance. A legislative framework for third-party establishment, protection, management, and verification of portfolio investments has not been established and a legal basis for conservation easements does not yet exist.

CAIMAN originally called for attention to several different sources of sustainable financing, including royalty and voluntary agreements with petroleum companies, conversion of public-sector debt into endowments, consideration of carbon and biodiversity offsets, and development of trust funds from private and nongovernmental sources. Although experiments with some of these have had success, few — if any — have been applied to the indigenous reserves supported by CAIMAN to date. Project designers were careful to emphasize territorial consolidation and technical capacity-building at the federation level, and the project

team has now realized the importance of building managerial and administrative capacity at the local level. Both of these things must be done before more sustainable indigenous-reserve finance can be secured.

### **CONSOLIDATION IS WORKING BUT NEEDS TIME AND FINANCIAL SUPPORT**

Indigenous communities now have titular authority over more than half of Ecuador’s remaining forestland and, arguably, of its most biodiverse and threatened habitats. However, no domestic or international institution has directly addressed the urgent need to organize funding mechanisms (funds, trusts, offsets, or easements) for continued support to indigenous-reserve management. The wide geographic dispersion of small indigenous communities, their relatively modest cash requirements, and the current organizational capacity of indigenous federations pose significant constraints to the development of sustainable financing mechanisms. The indigenous federations do not yet derive strength from membership participation, and frequent changes in leadership further undermine their credibility at the grassroots

level and open them to corruption from special interests.

**“Success with the Huaorani will be measured in generations, given the level of constraints.”**

**ANTHONY STOCKS, 2005**

Investment in conservation-finance schemes is further undermined by Ecuador’s inability to install and operate an effective forest management and enforcement

system that differentiates between legally harvested wood and a well-managed forest estate. The collapse of the national system for third-party forest regulation has exacerbated a historical undervaluation of forest resources and wood-product markets. This has further eroded international confidence in forest reinvestments, which remain key to protecting the areas around Ecuador’s highest conservation priorities. Poor enforcement of applicable environmental and forestry laws, the inability to protect conservation real-estate portfolios through rule of law, and government instability reduce Ecuador’s competitiveness for environmental finance.

### **FINANCIAL INSTRUMENTS AND KEY FEATURES FOR INDIGENOUS-RESERVE FINANCE**

Too many of the environmental-finance options originally foreseen during project design — debt-financed endowments, carbon credits, voluntary agreements with oil companies, and biodiversity prospecting agreements — have failed to materialize, largely due to political instability and offset-market immaturity. They were also hindered by limited regulatory capacity, inadequate fiscal incentives for charitable donations, and lack of an enabling policy for conservation easements; these limitations reduced the options available to indigenous communities to package and sell their conservation services and products.

Table 1 summarizes findings regarding conservation-finance instruments. The limited management capacity of indigenous groups to develop inventory information, establish and monitor activities, and protect indigenous reserves from unauthorized

use elevates the risk associated with investment. Building capacity to reduce this risk results in substantial transaction costs and uncertainty. Because of these risks and costs, it is unlikely that any one instrument will be adequate to sustainably finance indigenous reserves. It is necessary, then, to consider a blend of instruments — such as certification schemes combined with carbon or biodiversity offsets, or development of environmental trust funds through mixed endowments — which can help achieve conservation through reduced risk and higher political visibility.

**TABLE 1 FEATURES OF CONSERVATION INSTRUMENTS**

CONSERVATION INSTRUMENTS	CRITICAL FEATURES FOR CONSERVATION INSTRUMENTS						
	Legal basis	Baseline & verification	Market nature	Demonstrated experience	Management capacity	Transaction costs	Probable success
Conservation easements	no	required	voluntary	limited	none	high	distant
Private land-trusts	yes	optional	voluntary	some	none	high	distant
Environment endowments	yes	optional	voluntary	some	FAN, FONAG	medium	medium
Offset carbon & biodiversity	yes	required	voluntary	limited	yes (PROFAFOR)	high	medium
Environmental value credit	no	required	mandatory	none	none	high	medium
Certification schemes	yes	required	voluntary	some (FSC/ISO14K)	good	lower	close
Conservation restrictions	yes	not enforced	mandatory	unknown in indigenous reserves	inadequate MOE	low	close

The demographics of communities within the CAIMAN-supported indigenous reserves pose additional challenges for the establishment of endowments. Most communities are quite small and cannot absorb more than \$20,000-\$30,000/year for protection and management interventions. Managing the disbursement and accounting for small grants over wide geographic areas will require a grant facility exceeding the capacity of any in the CAIMAN-supported reserves, so working through an intermediary organization may be required for the foreseeable future while organizational capacity is built at the regional and federation levels. It is worth reemphasizing that CAIMAN is the first effort focusing specifically on the development of indigenous capacity-building for protected-area management in Ecuador — previous investments focused on biodiversity-conservation objectives without paying particular attention to improving these important capacities.

## ENVIRONMENTAL-FINANCE MARKET SEGMENTS, PHASING, AND TARGETS

Current political and institutional risks make long-term indigenous-reserve financing difficult. Development of a marketable portfolio of services and a successful business



Improving the regeneration and availability of plants used in handicraft manufacturing is key to Waorani women.

prospectus will require a phased strategy aimed at multiple market segments. The first phase will require assessment of hard and soft economic and ecological assets and construction of a prospectus that accurately captures value and risk. Once an initial portfolio is constructed, the prospectus will be shopped to a coalition of nongovernmental and public donors to anchor an endowment. This phase could include conversion of public debt and finance from a renegotiated petroleum agreement. Once a base of adequate political capital and visibility has been created, multilateral support (e.g., Global Environment Facility/World Bank/German Federal Ministry for Economic Cooperation and Development) could then be leveraged into a secondary position during a third phase. The fourth phase would target commercial investors seeking offset values or improved reputational exposure through direct investment.

Depending on the indigenous reserve's management capacity, there may be some opportunity to coax more direct investment into extractive industries conducted within sustainable parameters.

## PRIMARY RECOMMENDATIONS FOR WORK-PLAN CONSIDERATION

*Consolidate experience into three or four pilots projects.* CAIMAN has successfully helped build infrastructure and credibility for indigenous-reserve management over the past 18 months. The instability of federations continues to pose challenges, but they are better organized now at the national level and have begun to stimulate important activities at the local level. The remainder of the project will focus on establishing three or four "success stories," which will have enough management capacity and merchantable product around which business plans and prospectuses for extra financing may succeed. The team should carefully consider which of these can most realistically provide tangible, market-based goods and services, and select three or four for possible consolidation support:

- AWA Forest Certification/Mgt, San Lorenzo
- Conservation easement/incentive scheme (Awa/Reserva Vida)
- Ecotourism plan and market development (Awa/Reserva Vida)
- Gran Reserva Chachi — GTZ/CI/CAIMAN (ENDESA)
- Waorani Woman's Association agroforestry/handicrafts

*Blend local and international expertise to develop a prospectus.* CAIMAN should build on the strengths of its successful relationships with local service providers to analyze (break-even analysis, projected profit and loss statements, projected cash flows) revenue streams from the selected pilots. Realistic analyses of current goods- and services-flows, based on real market values, are a key first step in determining financial needs and scaling a business plan for possible investors. Financial projects should be developed after the target pilots are identified and a reputable accounting firm engaged to ensure financial reality and prospectus structure. It may also be worthwhile to establish contact with North American organizations that have worked specifically with establishing endowments and trust funds for indigenous communities and conducting field trips for federation leaders to meet with public, private, and nongovernmental finance leaders.

*Organize study tours and a national indigenous-reserve finance workshop.* Ecuador has not been as active as other countries in sustainable finance for protected areas over the past 10 years. Indigenous groups are less familiar with the different conservation-inance instruments than other indigenous communities in the region. Once a draft prospectus has been organized, CAIMAN should organize a series of field visits to countries with robust experiences in sustainable financing, such as Brazil, Costa Rica, and Mexico. Additional meetings (in the Washington, D.C. area and the Pacific Northwest with First Nations groups) offer a second, easy set of targets for establishing sustainable finance. Development of a national workshop for indigenously managed protected areas would be a long-overdue capstone event for the region and country.



# I. ASSESSMENT BACKGROUND AND OBJECTIVES

This section describes the basic conditions governing conservation finance in Ecuador and explores current and potential finance instruments. Much of Ecuador's remaining undisturbed biodiversity rests in the hands of its indigenous communities. Approximately 53 percent of Ecuador's forests has been allocated, under various legal forms, to eleven indigenous groups. CAIMAN works with several of these communities (see Table 1.1) to conserve biodiversity through three integrated activity areas:

1. Improving territorial consolidation through legal and paralegal support for land titling, surveying and delimitation of boundaries, and organization of protection services;
2. Building capacity within indigenous groups to help manage, conserve, and protect their valuable resources; and
3. Identifying and developing various methods to ensure the sustainable financing of selected activities in indigenous reserves.

CAIMAN represents USAID's most significant involvement with indigenous communities in Ecuador. Building on previous projects (e.g., Sustaining Uses for Biological Resources, or SUBIR) that established national organizations and some local capacity for enterprise activities, CAIMAN is the first project aimed specifically at helping indigenous communities improve their grasp on critical legal issues as well as their management capacity. Working with indigenous communities to address the three areas identified above requires careful appraisal of these communities' distinct organizational structures, capacities, and aspirations. It also requires ongoing reexamination of the best methods to measure project success, including organizational capacity development, sustainable finance, and poverty alleviation.



Waorani women's groups navigate greater distances every year in search of handicraft materials.

**TABLE 1.1 PRINCIPAL INDIGENOUS GROUPS AND TERRITORIES SUPPORTED THROUGH CAIMAN.**

TRIBE/TERRITORY	SIZE/HECTARES	REGION/CONDITION	POPULATION	LAND VOCATION
Huaorani	790,000	Amazon/primary & secondary rainforest	2,500	Forestry/conservation
Cofan	350,000	Eastern Andes/Amazon	1,000	Mixed use — ag/forestry/fisheries
Awa	120,000	Chocó	4,000	Conservation/forestry

### SUSTAINABLE FINANCE IN CAIMAN

CAIMAN’s early development considered several possibilities for sustainable financing, including voluntary agreements with private companies, development of royalty-based funds with extractive industries, consideration for public-debt transfers, development of carbon-offset programs, revenue streams from bioprospecting, and more traditional international nongovernmental-organization (NGO) funding. However, the political and commercial environment for such investments in Ecuador has stymied not only CAIMAN’s efforts but also those of most others. Several initiatives are worth mentioning in this regard:

#### **Fondo de Areas Protegidas**

The most compelling protected-areas financing program in Ecuador — and probably the country’s most successful environmental financing scheme of any sort — is the Fondo de Areas Protegidas (Protected Areas Fund, or FAP). This \$12 million endowment fund was established in 2002 with two successive German public-debt swaps (\$7 million total), a grant from the Global Environmental Facility orGEF (\$4 million), and a contribution from the Ecuadorian government (\$1 million). The endowment is managed by an offshore-investment advisor in a mixed portfolio of domestic and offshore investments, yielding a six-percent average annualized return. The fund seeks to provide \$50,000-\$60,000/year to each of nine protected areas managed through Ecuador's national park system. Project programming is done by the Fondo Ambiental Nacional (National Environmental Fund, or FAN). Although financial audits are conducted annually, there has not yet been a program audit to determine technical and cost-effectiveness of the investments in protected-area management.

#### **El Instituto para el Desarrollo Regional Amazónico**

Petroleum-related royalty and endowment schemes have received much attention but have done little to support protected-area or indigenous-community conservation efforts. Moreover, the experience of the Fondo del Ecodesarrollo de la Region Amazonica (ECORAE) royalty scheme suggests that project design and execution capability remain weak. The slowly increasing \$0.50/barrel royalty generates nearly

\$100 million every year, which is allocated to municipalities (60 percent) and provincial governments (30 percent) through an opaque process that lacks transparency and accountability. The recent review of 442 projects implemented between 1995 in 2001<sup>1</sup> revealed that only 135 had been executed successfully, 135 only partially implemented, and 172 had no evidence of activity at the operational level.

From 1993 to now, \$569 million has been allocated for projects with very limited accountability or discernible results at the provincial or municipal level.<sup>2</sup> According to NGOs and individuals interviewed, the 10 percent of ECORAE funding earmarked for regional development projects (and can be spent on conservation) and managed by the Instituto para el Ecodesarrollo Región Amazónica has not been well-programmed. ECORAE has evidently developed a considerable pipeline of unfunded activities largely due to poor-quality proposals and limited implementation capacity.<sup>3</sup>

Some in the environmental community indicated that the best mechanism for developing a sustainable-finance package could result from renegotiating ECORAE. For example, a portion of the fund could be set aside specifically for indigenous-conservation efforts. Given recent increases in oil and gas prices and significant changes in Ecuador's major petroleum partners, there may be an opportunity to renegotiate concession agreements and put more deliberate emphasis on community development and conservation options.

#### **Squandering Funds in the Amazon region**

Few know how the funds are distributed. The Central Bank of Ecuador says that it is the custodian of the money and that it abides by bank privacy rules; the Ministry of the Economy says that the Central Bank is aware of the deposits because they are outside of budgetary management. The truth is that the private petroleum companies and Petroecuador have set aside 569 million dollars for the municipalities and prefectures of the Amazon and ECORAE, from 1993 to 2005. Where does the money come from? Congress applied the Law for the Fund for Amazon Regional Ecodevelopment in 1993.

*El Comercio Julv 13. 2005*

### **ECOFONDO**

ECOFONDO gets its funding from companies transporting oil through the Oleoducto de Crudos Pesados (OCP) — an oil pipeline. Interviews conducted and materials reviewed indicate that ECOFONDO is really not a fund but rather an open-ended pledge to provide approximately \$1 million per year for conservation, training, and research. There is no endowment fund *per se* and the \$17 million that many people refer to as the “fund” simply does not exist: the consortium that uses the OCP simply agreed to provide discretionary funding for conservation purposes. According to FAN, which manages the fund, 60 percent of annual funding will go to environment

<sup>1</sup> El Comercio. July 13, 2005. “Despilfarro de fondos en la región amazónica.”

<sup>2</sup> Ibid.

<sup>3</sup> Kakabadse, Y. June 18, 2005. Personal communication.

initiatives in areas immediately adjacent to the OCP itself; another 30 percent (roughly \$300,000 per year) is earmarked for environmental activities in oil-production areas. Only 10 percent of annual funding appears to be available for conservation activities beyond areas immediately impacted by the production or transport of oil.

#### **Amazon Watch and the OCP**

*Indigenous groups in the north such as the Cofan, Quichua, Secoya and Siona have born the brunt of the environmental and social impacts of three decades worth of reckless oil operations. Contaminated rivers, soil, and skies, felled forests, and an exploding health crisis continue to take their toll. Basic services and infrastructure are lacking and malnutrition, prostitution, violent crime rates are among the highest in the nation. New oil production brought on by the OCP in their territories threatens to escalate this already existing dire situation.*

[http://www.amazonwatch.org/amazon/EC/ocp/index.php?page\\_number=4](http://www.amazonwatch.org/amazon/EC/ocp/index.php?page_number=4)

Many experts feel that most of the funds are being used to mediate the environmental impacts of OCP's construction and operations, which should have been mandated under Ecuador's Environmental Law. General opinion seems to hold that ECOFONDO, in fact, provides no relief whatsoever to indigenous communities whose land was significantly impacted during pipeline construction, and these populations face significantly elevated health risks — particularly childhood leukemia, due to exposure from drilling and operating waste streams.<sup>4</sup> Renegotiating the terms of ECOFONDO would provide an ideal opportunity to improve sustainable finance for indigenous reserves. However, the current exodus of large multinational oil companies from Ecuador — and the arrival of Asian companies less susceptible to social pressures from stockholders — may render such a renegotiation unrealistic.

#### **Joint ventures and bioprospecting**

Joint ventures to share revenues from biological diversity assets have not materialized in Ecuador or internationally. Shifts in U.S. legislation on intellectual property rights have stymied international pharmaceutical interest in activities similar to the famed but unreplicated experiment between Merck Pharmaceutical Co. and Costa Rica's Instituto Nacional de Biodiversidad. The failure of the United States to ratify the Convention on Biological Diversity has also undermined U.S. pharmaceutical interest in bioprospecting joint ventures. Although bioprospecting is certainly still occurring, most of it is now “below the radar” and unsanctioned, and intellectual property is not protected. Overall, bioprospecting has not met the expectations of conservation organizations or sovereign governments trying to protect valuable biodiversity assets. When indigenous reserves are well consolidated and indigenous organizations more capable of negotiating equitable bioprospecting deals, this could become a source of revenue.

---

<sup>4</sup> Hurtig, A., and M. Sebastian. 2004. “Incidence of Childhood Leukemia and Oil Exploitation in the Amazon Basin of Ecuador.” *International Journal of Occupational and Environmental Health*. Vol. 10:245–250.

## **PROFAFOR**

Ecuador's carbon-offset program, PROFAFOR (FACE Program for Forestation in Ecuador S.A.), has established a joint venture between private landowners and Chachi communities in the Sierra region and private investors to establish a 20,000-hectare pine plantation, which was recently certified to Forest Stewardship Council (FSC) requirements. This encouraging development shows emerging private-sector interest in developing carbon credits — even in the absence of biodiversity conservation instruments, which were explicitly excluded from the Kyoto Protocol. PROFAFOR is managed for mixed financial yields from sequestered carbon and the eventual sale of harvested incremental growth. Most importantly, it shows that Ecuadorian forests can be certified to international standards, and the experience in doing so was a valuable secondary benefit of the transaction. Ecuador ranks 13<sup>th</sup> of 16 Latin American countries for certified forests, with only two plantations currently certified.

## **Bosque Protector**

Another form of conservation on private areas is public-private protected areas. Ecuadorian indigenous reserves (which are considered private) cover 2.2 million hectares — nearly nine percent of the country's entire protected area. However, according to the Environmental Law Institute:<sup>5</sup>

“Implementation of the Bosques Protectores is relatively weak, and the responsible land management authorities are often under funded. As a consequence, many Bosques Protectores have been stripped of their vegetation by inappropriate land-use...”

Bosque Protector status restricts land use primarily to conservation activities and protecting wildlife and hydrological values. A 2002 change in the forestry code now encourages sustained-yield forestry when it does not conflict with established preservation criteria. Such “multiple use” requires a management plan that describes estimated timber yields, allowable cutting parameters, and potential impacts to other biological resources.

It appears, however, that in many (if not most) cases, Bosque Protector status has simply been declared over private property without significant participation by property owners, and awareness remains low. Many of the designated areas do not fulfill legal prerequisites required by the environmental ministry, such as demonstrated environmental value through biological assessment or broader environmental impact assessments. Only 17 percent of the named areas have the required management plans.

There is little reason to suspect the Bosque Protector program will be effective for biodiversity conservation, given the lack of enforcement of regulations on over-

---

<sup>5</sup> Environmental Law Institute [ELI], et al. 2003. “Legal tools and incentives for private lands conservation in Latin America: building models for success.”

harvesting and conversion to agriculture, poor coordination with other ministries involved in land-use decision-making, and the absence of tax incentives for effective conservation by private landowners. This is particularly unfortunate given that several of the Bosques Protectores are immediately adjacent to indigenous reserves.

## THE CHALLENGE TO CAIMAN

CAIMAN has been operating for approximately three years and has made significant territorial consolidation by building implementation capacity at various levels within indigenous federations, NGOs, and partners. The project has developed essential, collaborative working relationships and trust with the indigenous groups that it supports, and has now begun to focus on the options that can ensure the financial sustainability of efforts initiated under the project. After CAIMAN concludes, additional financial support will be needed to continue development of handicrafts and ecotourism, territorial demarcation, protection of indigenous reserve boundaries, and important gains in organizational development at the federation level.



Export of round wood reduces indigenous communities' ability to generate income.

This first requires identifying forms of financial support, which can defray the recurring operations costs associated with reserve protection and management. It also clearly requires a more comprehensive listing of potential and real conservation values and environmental services, including biodiversity, hydrology, timber and non-timber forest products, cultural attributes, and recreational values to local and international markets. Lastly, it means assessing current and near-term markets for buyers and sellers of these conservation values, and developing a prospectus and

marketing plan for potential investors. The intent of this work is to begin this process and identify the most obvious and immediate market targets of CAIMAN support over the remaining 18 months of project activities.

## ASSESSMENT OBJECTIVES AND METHODOLOGY

Because of many of the obstacles described above and in the following sections, CAIMAN initiated an assessment of sustainable conservation-finance options. The principal objective was to assess conservation-financing progress to date and determine which conservation-finance options are most applicable within indigenous reserves. To the extent possible, these findings will be incorporated within the upcoming work-planning exercise and will help the project focus on the best options for the remainder of its implementation.

An internal conservation-management specialist/consultant from Chemonics International worked with the team over a ten-day period to review key documents from the project and the field of conservation finance. The consultant also conducted

a significant number of interviews with primary CAIMAN partners, indigenous community representatives, leading conservation NGOs, and a number of multilateral finance organizations supporting biodiversity conservation in Ecuador and the United States (see Annex A for contact list). The consultant also visited an indigenous community in the Amazon. Most of the information gathered was secondary and based on interviews. The scope of work is attached in Annex B.



## II. CONSERVATION-FINANCE CONDITIONS AND OPTIONS

Much has been learned during the past 10 years in conservation finance. The variety of finance options has increased dramatically as professional finance has merged with conservation interests and markets, and fiscal incentives for the improved management of environmental services have expanded. Many options have proven effective and have demonstrated success under certain conditions, which are discussed in this section. The most common instruments include:

- *Conservation funds* are established by legally recognized authorities to fund specific conservation activities, including land management and acquisition.
- *Conservation easements* transfer development rights to legally recognized third parties in exchange for payments or tax relief.
- *Land trusts* transfer fee-simple land titles to registered land trusts for management, trade, or transfer to other parties.
- *Offset schemes* trade specific values (e.g., carbon and biodiversity) for unavoidable emissions or damage.
- *Environmental value credit trading* generates financial credits for trade when land use (wetlands) or legally regulated emissions (SO<sub>2</sub>) are exceeded.
- *Certification schemes* established standards and audit for particular uses, e.g., forestry, fisheries, or agriculture. Such schemes are not finance options *per se* but increasingly are preconditions for external investors in these sectors.

Although the above are often described as distinct mechanisms, they are frequently used in combination to respond to the specific opportunities in a particular location or market. This is especially true in Ecuador, where oil companies may contribute to FAN, which distributes grants for a wide range of subjects that may or may not be directly related to damage caused during oil exploration and production. In other cases, certification schemes are blended with offsets to reduce transaction costs and improve arms-length tradability, which is essential in the absence of a functioning forest-regulation framework.

## CONSERVATION FUNDS

Conservation funds are a broad category of finance and generally involve the development of a capital base through an endowment from which individual conservation projects are funded. Over the past 15 years, more than 100 environmental endowment funds have been created around the world. Nearly a quarter of these have been developed with support from the GEF, but few, if any, have been directly focused on the management of legally recognized indigenous reserves.

### Types of Conservation Funds

*Endowment funds* spend only income from capital, preserving the capital itself as a permanent asset.

*Sinking funds* disburse their entire principal and investment income over a fixed, long period of time. The U.S. Tropical Forest Conservation Act (TFCA) funds are an example.

*Revolving funds* are regularly replenished with proceeds from special taxes, royalties, user fees, etc., which maintain original capital. FONAG is an example.

There are several types of general conservation funds and a long history of their use throughout Latin America. The differences between the types of funds are important. Currently, there are only two conservation funds operating in Ecuador: FAP and FONAG. The former, a classic endowment fund, is detailed in Section I.

FONAG is managed by Fundación Antisana (FUNAN) and supported by The Nature Conservancy (TNC). FONAG has a current endowment of \$2.5 million, which is invested in a portfolio of international stocks and bonds

— generating annual returns of six to eight percent. This base revenue stream is augmented by Empresa Municipal de Agua y Alcantarillado Potable de Quito (EMAAP-Q) through a one percent gross-profit contribution. (See Table 2.1.) The Empresa Eléctrica de Quito (EEQ) also contributes 0.5 percent of their gross profits to the fund, recognizing the importance of water for power generation. For each of the past two years, regional brewery Cervecería Andina agreed to contribute \$6,000. In 1994, TNC began co-financing FONAG projects with USAID funding through the Parks in Peril “Biosfera Condor” project.

**TABLE 2.1 CONTRIBUTIONS TO FONAG THROUGH DECEMBER 2004.<sup>6</sup>**

Contributors	2000	2001	2002	2003	2004	Total Through Dec 04
EMAAP-Q	\$160,000	\$240,000	\$360,000	\$360,000	\$400,000	\$1,520,000
EEQ		\$45,000	\$45,000	\$45,000	\$50,000	\$185,000
TNC	\$1,000					\$1,000
Cervecería Andina				\$6,000	\$6,000	\$12,000
						\$1,718,000

<sup>6</sup> TNC. 2005. Case Study of Watershed Valuation in the Condor Bioreserve, Ecuador. Draft.

TNC's financing agreement with FONAG allows them to use only the interest generated from their \$2.1 million endowment, which in 2004 generated \$140,000 for project use. This revenue finances protection and management activities in the Cayambe Coca and Antisana reserves, which form the headwaters for 80 percent of Quito's water supply. Some protection activities employ indigenous communities to patrol remote areas.

FONAG is the best example in Ecuador of a sustainable-financing scheme for protecting environmental services, specifically water. Managing this watershed correctly for stable water yields is important to both commercial and residential stakeholders, as shown in numerous places (Table 2.2). Interestingly, the one-percent profit contribution is a well-kept secret and there seems to be a near-explicit policy not to communicate with the public about how this levy is used. It seems odd that an environmental service with direct economic and health relevance is not marketed as such, because of sensitivity over public reaction to rising water prices, such as occurred in Cochabamba, Bolivia in 1999. To address this issue, USAID recently supported the development of a communications strategy for FONAG through a grant, which should improve the tools and methods to create effective marketing of the value of such services.

**TABLE 2.2 IMPORTANT WATERSHEDS MANAGED AS PROTECTED AREAS.<sup>7</sup>**

COUNTRY	PROTECTED AREA	URBAN WATER SUPPLY IMPACTED
China	Qinling Mountains	Xi'an
India	Borivilli	Mumbai
Indonesia	Gunung Gede-Pangrango	Jakarta and Bogor
Philippines	Northern Sierra Madre	Manila
<b>Ecuador</b>	<b>Cayambe Coca &amp; Antisana</b>	<b>Quito</b>
Haiti	Pic Macaya	Les Cayes
Venezuela	El Avila	Caracas
Cote d'Ivoire	Foret de Banco	Abidjan
South Africa	Maloti-Drakensberg complex	Durban and at Johannesburg
Tanzania	Udzungwe	Dar es Salaam
Bulgaria	Rila & Viticha parks	Sophia

Currently, there are no active sinking funds in Ecuador. USAID once believed there was potential for public debt-financed sinking endowments, including through the TFCA, oil royalty-based financing, biodiversity prospecting, and development of carbon offsets. However, Ecuador has failed to meet IMF criteria required under the Enterprise for the Americas Initiative (EAI) to convert public-sector debt to biodiversity-endowment funds. Discussions with the TFCA/EAI secretariat in Washington suggest that although the door is still open to establish a TFCA as an

<sup>7</sup> World Bank. 2003. "Assistance to protected areas 1998-2003."

endowment for forest conservation, obstacles in meeting IMF goals and the current state of forest management in Ecuador discourage negotiation.

The absence of a more dynamic conservation-fund movement in Ecuador is striking, particularly given the strong national environmental movement and presence of international conservation NGOs. Several of these traditional USAID partners, including TNC and Conservation International, are only now beginning to assess the various mechanisms available for sustainable financing for protected areas, and only one (Wildlife Conservation Society, or WCS) appears interested in working specifically within indigenous reserves. Except FAN, which generates modest revenues only for national parks, there are no conservation funds or activities aimed directly at indigenous groups, who hold many of the keys to long-term biodiversity and cultural conservation.

Interestingly, much of the 5<sup>th</sup> IUCN World Parks Congress focused specifically on building financial resources for protected-area management and made either recommendations on “private sector funding for protected areas,” with specific recommendations for improving the roles and authorities of indigenous communities to manage protected areas.<sup>8</sup> The role of indigenous communities in the management of protected areas, particularly transboundary areas, figures prominently in USAID’s recent Amazon conservation assessment<sup>9</sup> and subsequent concept paper.<sup>10</sup>

## OFFSETS

Offsets are another type of financial mechanism to transfer public and private wealth to support environmental services have been through several types of offset programs.

### Biodiversity Offsets

There has been much discussion recently about biodiversity offsets, which are generally defined as compensatory mechanisms in which unavoidable damage to biodiversity in one location is exchanged for the protection of similar or equally valuable biodiversity at another location. Like carbon offsets (described below), biodiversity offsets are developed to compensate for losses and create conditions for “no net loss” of biodiversity.<sup>11</sup>

Biodiversity offsets are founded primarily in developed economies, most often with strong regulatory frameworks and enforcement capability. In the United States, the Clean Water Act of 1973 provided the basis for wetlands trading, which enabled developers to exchange habitat damaged during commercial or residential development for similar wetlands protection elsewhere. Similar habitat-trading is found in the EU in bird directives established in the early 1990s. More recently,

---

<sup>8</sup> Quintela, C., L. Thomas, and S. Robin. 2003. “Proceedings of the workshop stream building a secure financial future: finance and resources.” 5th IUCN World Parks Congress. Gland, Switzerland.

<sup>9</sup> USAID Natural Resources Information Clearinghouse. 2005. “Conserving Biodiversity in the Amazon Basin: Context and Opportunities for USAID.” Washington, D.C.: Chemonics.

<sup>10</sup> USAID. 2005. “Amazon basin conservation initiative: concept paper.” Washington, D.C.

<sup>11</sup> IUCN/Insight Investments. 2004. “Biodiversity offsets.”

Brazil has established biodiversity offsets under the forest regulation and national system of conservation units, which has developed an elaborate scheme to allow agriculture and commercial conversion of high-value habitats in exchange for strongly protected, similar habitats elsewhere.

Generally speaking, biodiversity offsets are founded in a blend of regulatory and voluntary systems that depend on functioning markets where buyers and sellers can trade. Many of the incentives for biodiversity-offset trading concern corporate public-relations risk and the development of regulatory goodwill. Other reasons include regulatory relief, lower costs of compliance with local laws, improved access to financial markets owing to better management infrastructure and risk reduction, and development of new products and competitive features associated with current product offerings.

#### **Defining Biodiversity Offsets**

*“Conservation actions intended to compensate for the residual, unavoidable harm to biodiversity caused by development projects, so as to ensure no net loss of biodiversity.”*

“Biodiversity offsets: Views, experience, and the business case.”  
IUCN/Insight Investments, 2004.

Spurred by the Equator Principles’ recent ratification by more than 30 of the world’s largest private banks — including Citigroup, JP Morgan, Chase, Barclays, ING, ABN AMRO, and the World Bank group — lenders are increasingly conducting systematic environmental reviews of investments, including their impacts on tropical forests and biodiversity. While the business case for biodiversity offsets continues to be built, large extractive industries — including petrochemical, forestry, mining, and utilities — show growing interest in biodiversity offsets as a way to reduce corporate risk and maintain market share.

One of the major obstacles to offsets is establishing equivalency between biodiversity values lost during development and those traded in exchange. The execution of biodiversity offsets is much more complicated than that of carbon offsets, and the economic- and social-valuation procedures are much less developed. Other issues of particular relevance to the situation in Ecuador include the capacity of local organizations to ensure offset management, development of ecological baselines necessary for valuation, and installation of verification capacity to ensure achievement of the desired outcome.

Effective biodiversity offsets depend on transparent, functional agreements between governments, corporations, local conservation organizations, and affected communities, many of which remain elusive in Ecuador, where adversarial relationships between the petroleum industry and indigenous communities precludes industry involvement in biodiversity offsets. Given that offsets could be voluntary corporate commitments carried out in the name of reputation-building, offsets will have to be conducted in areas where equivalency between biodiversity values can be easily achieved (e.g., similar ecosystems damaged in development must be conserved). For companies to buy biodiversity offsets in the tropics for development activities elsewhere, they must either be driven by philanthropic incentives or operate

within legal frameworks that enable the value of the biodiversity offsets to be recognized in countries that have a strong rule of law. Neither of these features is yet a driving force in Ecuador.

### **Carbon Offsets**

Corporations worldwide are seeking methods to improve financial performance through risk reduction in environmental and social contexts. Beyond philanthropy and reputation management, many companies look for specific goods or services that improve the bottom line, either through cost reduction or development of new product lines in emerging markets. The business of climate change, regardless of the Kyoto Protocol, is no longer environmental fiction and is quickly moving toward market-based reality. Although the markets for carbon have evolved slowly, most major producers of carbon emissions — including manufacturing, petrochemical production, power generation, and transportation — are now looking for methods to reduce or offset their liabilities. The financial and reinsurance sectors have evolved from speculative bystanders to partners in defining these markets. Since the Russian acceptance of Kyoto earlier this year, several initiatives show impressive growth in the variety and types of carbon markets.

Likewise, the relationship between carbon emissions and carbon-sequestration stocks has evolved. Signatories to the Kyoto Protocol have begun to implement regulatory approaches to greenhouse gas emissions, resulting in carbon trading. Carbon exchanges now provide additional incentives to companies with a blend of interests. Some of the broader environmental features now explicitly included in carbon trading and offsets include:

- Preventing the extinction of globally important plant and animal species;
- Protecting other ecosystem services, including hydrology and soil conservation benefits;
- Stimulating economic activity in under-developed regions with important biodiversity;
- Strengthening ecosystems at high risk from the effects of climate change; and
- Capturing low-cost climate-protection options and mitigating long-term impacts.

In Ecuador, many — if not all — of these features come into play, and biodiversity values suggest that indigenous communities could ultimately benefit from the value of carbon stored in and under well-managed forests of high conservation value. Ecuador consistently ranks among the top ten countries in the world for biodiversity richness, particularly when birds, reptiles, amphibians, and higher plants are

concerned.<sup>12</sup> When combined with its carbon-storage potential, estimated at 320-640 million tons through new growth and slowed deforestation,<sup>13</sup> Ecuador consistently ranks in the top 20 for carbon-market potential.

However, Ecuador faces serious challenges to participating in carbon markets and offset programs. Most frameworks for carbon “parking” and eventual trading require that offsets be managed to increase storage and not simply to reduce emissions from deforestation. Several new instruments — including conservation and “low till” farming — can increase the carbon stored on a particular site, and forests managed under certain circumstances

(long rotations, products used for long-term/construction use) are now being considered for carbon parking and offsets. This concept of “additionality” is often combined with a need to show a clear and present threat to carbon stores. The notions of additionality and threat mean that carbon offsets on indigenous reserves must have adequate protection; clear definition of boundaries; transparent, clearly defined, and acceptable management practices; and development of baseline and verification systems. (See Table 2.3.) In the

**TABLE 2.3 MANAGEMENT FEATURES ASSOCIATED WITH CARBON OFFSETS AND PROBABILITY OF ACHIEVEMENT IN INDIGENOUS RESERVES.**

MANAGEMENT FEATURES	PROBABILITY OF SUCCESS		
	High	Medium	Low
<b>Additionality</b>		X	
<b>Clear &amp; present threat</b>	X		
<b>Clear boundaries &amp; title</b>	X		
<b>Protection capacity</b>		X	
<b>Environmental services</b>	X		
<b>Management capacity</b>			X
<b>Baseline condition</b>		X	
<b>Monitoring capacity</b>			X

United States, additionality is being explored with forests that are under conservation easements and protected against future development by federal and state laws. The best example is the Pacific Forest Trust’s forest climate program:<sup>14</sup>

“Carbon producers — whether power companies, other businesses or individuals — can work with PFT to purchase forest carbon credits. Such purchases help pay for the acquisition and management of conservation easements. In return, buyers receive low cost, permanent and scientifically verifiable credits for the additional carbon stored. Such purchases also help protect and restore some of the world’s most ecologically bountiful forests. *Green Mountain Energy Company*, for instance, is one such company that has purchased PFT’s carbon credits generated from permanently conserved California forestlands.”

<sup>12</sup> Goombridge, B., and M.D. Jenkins. 2002. *World atlas of biodiversity: Ruth’s living resources in the 21st century*. University of California Press.

<sup>13</sup> Trexler, M. and C. Hogan. 1995. “Keeping it green: tropical for street opportunities for mitigating climate change.” World Resources Institute.

<sup>14</sup> <http://www.pacificforest.org/services/forever.html>.

Although the Kyoto Protocol does not yet fully recognize forest sequestration as an offset method, other markets are beginning to do so and California's recent move to recognize carbon as a forest-stewardship practice<sup>15</sup> bodes well for forest-carbon sequestration and accounting.

Although Ecuador meets many of these conditions — and far exceeds those that relate to the importance of biodiversity conservation — indigenous capacity to protect and manage offsets remains a serious obstacle. A good model is being developed in Ecuador and several neighboring countries are experimenting with carbon-offset markets in response to the challenges mentioned above.

The PROFAFOR project has established 20,000 hectares of pine plantations in the Sierra, with 35 percent community-owned and 65 percent owned by a private enterprise. The simplicity of plantations established in secondary forests or reclaimed pastures responds well to the additionality requirements of carbon offsets. PROFAFOR's joint venture provides clear ownership, transparent expectations from all interested parties, a simple management system, and an ideal setting for monitoring carbon production and sequestration. To verify production and assure that management conditions meet those stipulated in the offset agreement, PROFAFOR has chosen to use the Forest Stewardship Council Principles and Criteria, which are assessed annually by SGS Qualifor, an independent certification body. Internationally recognized environmental-management systems (e.g., ISO 14001) are being used<sup>16</sup> under similar circumstances elsewhere, and there is some evidence of such systems being used in Ecuador's petroleum and manufacturing sectors.

Carbon stored in offsets and sequestration devices could provide additional revenue (\$5-\$6/ton in the United States, and \$35/ton on the London Carbon Exchange) to offset protection and management costs of indigenous reserves. However, management conditions and security of reserves from illegal extraction activities and invasion from displaced people, particularly in the northern frontier zone, are likely to reduce the appeal of carbon offsets as a primary market in Ecuador. It is more likely that carbon offsets could be used after other conservation-finance mechanisms have been initiated and there is some semblance of regulatory compliance for forest management.

## **LAND TRUSTS, CONSERVANCY AND CONSERVATION EASEMENTS**

The definition of "land trust" varies but usually includes organizations that acquire or receive real estate or conservation easements from donations or simple fees. Land trusts often conduct a land deal and then transfer the easement property to a third party (frequently, local, state, or federal authorities) for management. This assumes the third party — whether an NGO or public agency — has the means and technical capacity to ensure management of the trust in perpetuity. Land trusts are generally

---

<sup>15</sup> <http://www.climateregistry.org/protocols/fp/>.

<sup>16</sup> Sullivan, R., and J.M. Sullivan. 2005. "Environmental management systems and their influence on corporate responses to climate change." Published in *The business of climate change: corporate responses to Kyoto*. Greenleaf Publishing.

capable of overseeing land set aside for strict conservation of working forests with high-value biodiversity, recreational, or hydrological attributes.

Fueled largely by individual entrepreneurs or philanthropists, land purchases have become commonplace in Chile, Argentina, Peru, and Bolivia. Investment institutions (such as Goldman Sachs) and individual corporations (including Microsoft and Intel) have also begun to invest in high-value conservation areas. The Nature Conservancy has been purchasing and setting aside land for many years with excellent results.

**TABLE 2.4 PRIVATE-LAND CONSERVATION INITIATIVES IN THE AMERICAS**

	<b>Mandatory Land Use Restriction</b>	<b>Formal Private Reserve</b>	<b>Conserv. Easement</b>	<b>Appurt. Easement</b>	<b>Conserv. Concession</b>	<b>NGO Ownership</b>	<b>Economic Incentives</b>
Canada			++	+		++	++
USA			+++	+		+++	+++
Mexico	+		+	+		++	+
Guatemala	+	++		+		++	+
Costa Rica	+	++		++		+++	++
Ecuador	+	++		+		+++	+
Peru	+	+			+	++	
Bolivia	+	+		+	+	++	+
Brazil	++	+++				+++	+
Paraguay	+			+		++	+
Argentina	+	+		+		+++	+
Chile	+	+			+	+++	

+ = weak or beginning; ++ = moderate; +++ = strong or well established.

Source: Environmental Law Institute

Land trusts are popular where private conservation areas are legally recognized and local institutions are capable of privately or publicly managing the trust. Outright acquisition of real property is expensive, and most trusts are purchased from governments with limited organizational capacity and political instability. In Latin America, private ownership of land trusts occurs only in countries with a significant middle class and political stability, like Argentina, Chile, Costa Rica, and Mexico.<sup>17</sup> Table 2.4 provides an overview of types of land trusts (including conservation easements) currently established in Latin America and institutional conditions.

In Ecuador, three organizations have established a private protected-area system over the last 18 years. (See Table 2.5.) Focusing on biodiversity hotspots of high

<sup>17</sup> Frank Zeller. July/August 2005. "Buy Now and Save." *Worldwatch*. Vol. 18, No. 4.

conservation value, these organizations have set aside 15 key areas over 22,500 hectares and plan to acquire another 22 such areas to cover a total of 60,000 hectares. Several of these private protected areas, such as the Reserva Jatun Sacha, are contiguous with indigenous reserves.

Conservation easements differ from land trusts in that the title of the real property does not change hands. They allow a land owner to retain possession of real estate while agreeing to restrict future development to specific uses that are monitored by third parties, such as an NGO. In essence, conservation easements allow a land owner

Organization	Founded	Number of Areas		Size of Areas (Ha.)	
		Current	Planned	Current	Planned
Fundacion Jatun Sacha <sup>108</sup> Objective: Endangered ecosystems not well represented in Ecuador's protected areas	1988	5	6	8,500	15,000
Nature & Culture Int'l <sup>109</sup> Objective: Conservation of all representative habitats in southwest Ecuador	1997	3	6	8,000	24,000
Fundacion Jocotoco <sup>110</sup> Objective: Conservation of habitat of endangered bird species	1998	7	10	6,000	60,000

*Source: Environmental Law Institute 2003.*

to sell future development rights to a third party, who ensures that the terms and conditions of the easements are respected. Although there are private markets for such easements, they have been most successful when given to an

NGO in exchange for a legally recognized charitable contribution, with benefits (such as income tax relief, reduced real estate taxes, and reduced estate taxes) accruing to the land owner.

Conservation easements require establishment of a pre-easement condition, specific land use allocations and conditions for the easement's maintenance, and regular third-party verification of compliance with the easement. Many countries have established legally recognized organizations which "hold" such easements and ensure conformance to agreed-upon land usage through baseline establishment and annual audits.

Such easements have been very successful in the United States, where tax laws allow income-tax deductions of the appraised value of foregone development. However, these easements depend heavily on functioning real-estate markets, national enabling legislation, applicable tax codes, and well-organized third parties that can negotiate the transaction and ensure compliance with easement specifications. Although Ecuador's real-estate market is developing quickly, current tax law does not recognize easement deduction. Because property codes in Latin America are based on European property codes and tax structures (which only recognize "appurtenant" easements — between two adjacent properties), no countries there have enacted legislation underwriting conservation easements. Notably, however, several middle-income countries are now experimenting with easements, and Costa Rica, Chile, and Brazil

are considering property and tax codes to stimulate the use of conservation easements.<sup>18</sup>

For the time being, the use of land easements is discouraged by the difficulty of negotiating and executing easements with indigenous federations and other groups, which cannot ensure agreement among their members on land use. According to the Environmental Law Institute,<sup>19</sup> four traditional easements are used for conservation purposes in Ecuador, covering approximately 300 hectares and supported by El Centro Ecuatoriano de Derecho Ambiental (CEDA). Costa Rica has nearly 5,000 hectares under 42 such easements, and the use of easements in developing national legislation is a priority for many NGOs throughout Latin America.

Acquisition of real estate for inclusion in land trusts in Ecuador will require changes in national policy as well as the development of guidelines for indigenous-reserve management. (See Table 2.6.) Although there is no doubt that important biodiversity assets could be protected in this way, the involvement of communities living in and around land

trusts would require a higher degree of negotiation than is currently possible. An explicit agreement on acceptable land-use within a land trust occupied by indigenous groups would equate to a blending of land-trust and conservation-easement principles, which could be very useful in Ecuador. The most likely candidate for such an experiment would be the 21,000-hectare Reserva de La Vida, which is titled to the Awa Federation.

**TABLE 2.6 LAND-TRUST AND CONSERVATION-EASEMENT REQUIREMENTS FOR INDIGENOUS RESERVES.**

REQUIREMENTS	CURRENTLY EXIST
Legislative recognition	no
Fiscal incentives	no
Clear boundaries and title	yes
Market-based services	maybe
Management capacity	limited
Baseline establishment	yes
Monitoring capacity	no

<sup>18</sup> ELI, 2003.

<sup>19</sup> *Ibid.*



# III. PROSPECTUS DEVELOPMENT AND LIKELY TARGETS

As shown in the previous sections, CAIMAN cannot depend on traditional sources for sustainable finance of indigenous-reserve activities. The overall investment environment in Ecuador is challenging, and the specific requirements of indigenous groups — particularly at the local level — require consideration of alternative instruments and targets for funding. This section outlines the most salient conservation-finance packages geared to indigenous communities in reserves through the leveraging of current market demand.

## DEVELOPMENT OF INVESTMENT PROSPECTUS

### Portfolio Content

There is little doubt that the biodiversity in CAIMAN partner reserves is of the highest conservation priority for virtually all international conservation organizations. That said, however, it is clear that given the current institutional and political conditions in Ecuador, biodiversity value in and of itself is unlikely to secure sustainable financing. It is imperative that while developing a debenture (a debt instrument secured by issuer integrity or word, not by collateral or assets) for consideration by private- and public-sector partnerships, the project prepare a robust portfolio of environmental services and potential marketable commodities beyond biodiversity, including:

- Biodiversity attributes: endemism, complexity, endangered species, threats.
- Definable livelihood values: agriculture, hunting, recreation, culture.
- Current external income streams: handicrafts, agriculture, tourism, forestry, hunting.
- Other environmental services: carbon sequestration, hydrological services, recreation and cultural values and knowledge.

Many of these values are “stand alone” commodities worthy of investment. However, only a composite valuation of these goods and services is likely to encourage

investors to look beyond the significant political risks in Ecuador’s indigenous-reserve system.

## Valuation Techniques

Most valuation work for protected areas in developing countries tends to rely on incomplete information, often using theoretical economic instrumentation and paying little attention to direct revenue streams. There is ample attention to the methods for conducting appraisals, but these depend on proven income streams where there is a demonstrated societal willingness to pay for specific environmental services. The Achilles’ heel of conservation finance is the disconnect between identified value and proven willingness to pay for environmental services or sustainable production of commodities. The paucity of good inventory and production information on readily traded goods from indigenous reserves in Ecuador creates obstacles that require long-term attention.

**TABLE 3.1 MARKET FOR ENVIRONMENTAL SERVICES**

DEMAND	SUPPLY
What are the specific services?	How are these services generated?
Who benefits from these services?	What impact on services if land use changes?
How much benefit do they receive?	Who generates these services?

To the greatest extent possible, a prospectus should relay transactional data associated with the most readily traded commodity. In other words, values should be assigned to potential and likely land-use activities, such as timber extraction or agriculture. FONAG’s success has been largely due to its ability to (quietly) determine the value of grazing allotments and protected areas above Quito, and, in turn, to develop a prorated method for

the loss of this revenue at the household level. The rigor of the study and the development of a political constituency during its undertaking were key factors in convincing the municipal water utility to consider conservation activities.<sup>20</sup> Similarly, the experience with water and sanitation services throughout Brazil — and the use of fiscal incentives to encourage links between protected areas and downstream water and sanitation users — is very instructive.<sup>21</sup> As seen in Table 3.1, water-related values provide the most direct value, most directly, to protected areas.

Focusing on the broad market for our model services is key to constructing a viable prospectus and business plan for indigenous reserves.

Given that many environmental services are absent from local marketplaces, portfolio developers must consider how the services’ composite value can be disaggregated

<sup>20</sup> Echavarría, Martha. 2001. “The water-based finance mechanism of the Condor Bioreserve in Ecuador.” Published in *Mobilizing Funding For Biodiversity Conservation: A User-Friendly Training Guide*.

<sup>21</sup> May, Peter H., Fernando Veiga Neto, Valdir Denardin, and Wilson Loureiro. 2002. “Using Fiscal Instruments to Encourage Conservation: Municipal Responses to the ‘Ecological’ Value-added Tax in Paraná and Minas Gerais, Brazil.” Published in *Selling forest environmental services: market-based mechanisms for conservation and development*. Earthscan Publications, Ltd. London.

into discrete revenue streams and marketed to the most directly interested investors. These sorts of investments are not traditional by any means. The benefits of investment in conservation financing in Ecuador are not easily quantifiable, but they include improved corporate image, good relationship with Ecuador's environmental authorities, and compliance with the requirements of socially and environmentally responsible funds.

This will likely require marketing the prospectus to three or four types of investors, including direct local consumers (water, grazing, recreation), international-commodity traders (wood, tourism, petroleum security), international institutions (carbon, biodiversity, cultural survival), and in-country corporations that value social responsibility.

### **Risk-reduction Tools**

Portfolio developers should carefully identify all methods and tools that reduce risks and improve investor comfort. Important methods to reduce risks include loan guarantees, access to political risk insurance, financing through various sources to spread risk and increase international visibility, and securing the government's willingness to protect such investments through rule of law. Risk reduction reduces the costs of entry for potential investors and improves their comfort as conservation-investment pioneers.

Various organizations provide loan guarantees that can bring commercial finance into the picture. For example, organizations such as USAID's Development Credit Authority (DCA) can provide loan guarantees for portfolio lenders or single transactions. The DCA provides a 50 percent guarantee on loans of up to \$4 million for Ecologic, a nonprofit conservation organization that uses financial services to achieve its objectives.

Several environmental endowment funds have been guaranteed by DCA, and USAID-supported projects are increasingly turning to this facility to reduce transactional risk. Bilateral, multilateral, and commercial organizations that underwrite political risk through insurance (e.g. U.S. Overseas Private Investment Corporation, Multilateral Investment Guarantee Agency) can reduce interest rates and provide venues for international arbitration during disputes, and should be considered during portfolio development. Beyond financial risk-reduction, involving these organizations in transactions increases international visibility, reduces the potential for default, and improves refinancing potential once better market information becomes available.

Many of these organizations are essential to continued multilateral support and implementing structural adjustments, which can focus more attention on international rule of law.

### **POTENTIAL-INVESTOR TYPOLOGY**

Because of the inherent risks and the lack of high-quality market data, capital formation for indigenous reserves must be viewed as a series of transitional

opportunities that are likely to evolve over time. Developing a good foundation for improved management, valuation, and marketing services to consumers and stakeholders is key to building momentum and credibility.

**TABLE 3.2 FINANCIAL SUPPORT FOR INDIGENOUS RESERVES**

A NGOs & public sector ▶▶	B Philanthropic foundations ▶▶	C Donor/public- sector debt ▶▶	D Multilateral banks/GEF ▶▶	E Individual corporations ▶▶	F Commercial banks ▶▶	G Institutional investors ▶▶
---------------------------------------	---	---	--------------------------------------	---------------------------------------	--------------------------------	---------------------------------------

Financial support for indigenous reserves in North America has followed a path like the one described in Table 3.2, and Ecuador follow the same example, provided that initial support for management infrastructure is sustained long enough to help communities consolidate their legal and managerial capabilities.

Because of the diverse nature of markets and services that transcend public-private operations, portfolio designers should seek to create partnerships with investors that match their objectives and risk tolerance. Bundled public-private partnerships show the most promise but are a complex, expensive undertaking for current CAIMAN

<b>Commercial and Industrial Options</b>
<i>Utilities:</i> Oil and gas, cement manufacturing, mining, energy production
<i>Forest Products:</i> Agrifood, financial services, construction

management. An investment structure supported by a blend of soft money (A and B), support from donor or multilateral organizations (C and D), and commercial-grade investment (E and F) would provide stability through broad goals, shared risk, and high visibility.

### COMMERCIAL OPTIONS FOR FUNDING

As previously noted, funding for indigenous-reserve protection starts with continued support from NGOs, which leverage support from donors like USAID. Given the current investment and institutional environment, soft philanthropic support is likely to remain the primary funding source for the foreseeable future. If and when political stability and rule of law are established in the forestry sector, broader corporate social responsibility activities could include carbon offsets and other transfers for damage or values converted elsewhere. Once some success has been achieved in these areas — and there are signs that progress is occurring with PROFAFOR and FONAG — there will be more purely private, market-based action. CAIMAN and USAID staff can approach such companies directly, but there is value in establishing partnerships with more visible conservation organizations, such as WCS or TNC, which may be able to provide more “branded” conservation-product development and seek international funding.

### **Key Lessons for Encouraging Private Sector Investment in Protected Areas**

**Clearly identify the services being provided.** Potential buyers are not interested in generic forest, water, or biodiversity services. Rather, they are interested in clean water, or in a reliable dry-season water supply, or in access to genetic information. Without a clear understanding of which specific services a given forest is providing, and to whom, financing through PES is difficult.

**Understand and document the links between ecosystems and services.** Just as important as identifying the services, is understanding how these services are generated. Too often, conservation advocates simply rely on conventional wisdom, such as 'forests improve water supply.' Even when the conventional wisdom is right, it is often insufficiently precise to allow effective mechanisms to be designed. What kind of forest is most effective in improving water supplies, for example, and where should it be located? How compatible are other uses? Without answers to questions such as these, the mechanism is unlikely to work effectively.

**Begin from the demand side, not the supply side.** By focusing on the demand for services and asking how best to meet it, it is more likely that an effective and sustainable PES mechanism will be developed. Without demand, there can be no market. Beginning from the supply side risks developing mechanisms that supply the wrong services, in the wrong places, or at prices that buyers are unwilling to pay. Supply driven mechanisms are likely to have a higher mortality rate than demand-driven ones.

**Create an appropriate institutional structure.** PES programs require a supporting institutional infrastructure. Mechanisms must be in place to collect payments from environmental service beneficiaries, and to channel these funds to the protected areas that provide the services. Private sector firms need to have confidence that the payments they make will be used to protect or generate the services they seek, and not diverted to other uses or frittered away inefficiently.

**Monitor effectiveness.** Monitoring effectiveness is essential to assuring buyers that they are getting what they are paying for, and to adjust the functioning of the mechanism should problems arise. At the same time, excessively burdensome monitoring requirements can discourage potential suppliers without necessarily providing more reassurance to buyers. Finding the right balance of information and compliance costs is an ongoing concern, as seen in the case of markets for certified timber and agricultural products.

*"Paying for the Environmental Services of Protected Areas: Involving the Private Sector,"  
5<sup>th</sup> World Parks Congress: Sustainable Finance Stream, World Bank*



## IV. CONCLUSIONS AND RECOMMENDATIONS

The communities and indigenous federations supported by CAIMAN have difficult decisions to make over the next 18 months. Given limited experience working with evolving indigenous federations and nascent local groups, many current activities show promise but have not yet provided conclusive answers to the question of how to achieve sustainable financing. The ability to work collectively at the local level in pursuit of a particular project (e.g., ecotourism, handicrafts, forest management) is as variable as the ability of community groups and indigenous federations to work successfully with the national indigenous organizations that are supposed to represent them. The strength of the national umbrella organizations does not yet match the organizational capacity or understanding of communities in and around indigenous reserves.

### EXPERIENCE AND MEETING CRITICAL CONDITIONS

The environmental-finance options foreseen during project design (debt-financed endowments, carbon credits, voluntary agreements with oil companies, and biodiversity-prospecting agreements) have, for the most part, failed to materialize, largely due to political instability and failure to obtain operational agreement for the national forest-verification scheme. Hindered by limited regulatory capacity, inadequate fiscal incentives for charitable donations, and a lack of enabling policy for conservation easements, indigenous communities have limited options for packaging and selling their conservation services and products.

Table 4.1 summarizes the features required to stimulate support for sustainable finance within indigenous reserves. There is no legal basis for several of the most-used finance instruments, however. There is a limited but growing capacity to establish baseline conditions within reserves and verify adherence to management requirements of the various sustainable finance instruments. The market for voluntary contributions to easements, trusts, and endowments remains precarious given Ecuador's poor regulatory track record and political volatility. And although there is growing capacity for management and certification, particularly within NGOs and some of the more established indigenous federations, most of CAIMAN's partners are not yet able to establish or implement management plans, which significantly limits their investment worthiness. The exception to this may be FCAE (Federación de

Centros Awa del Ecuador), which is better organized, has a transparent management structure, and is developing good cartographic and GIS capacity. Compared to their neighbors, Ecuador’s indigenous reserves offer extraordinary biodiversity and high transaction costs and institutional and political risks.

**TABLE 4.1: CONSERVATION-FINANCE OPTIONS AND CRITICAL IMPLEMENTING THE FACTORS FOR INDIGENOUS RESERVES IN ECUADOR**

INSTRUMENTS	CRITICAL FEATURES						
	Legal basis	Baseline & verification	Market nature	Demonstrated experience	Management capacity	Transaction costs	Probable success
Conservation easements	no	required	voluntary	limited (4) (CEDA)	none	high	distant
Private land trusts	yes	optional	voluntary	some (65)	none	high	distant
Environmental endowments	yes	optional	voluntary	FAN	some (FONAG)	medium	medium
Offset schemes	yes	required	voluntary	limited/CO <sub>2</sub>	yes (PROFAFOR)	high	medium
Certification schemes	yes	required	voluntary	some (FSC/ISO14K)	good	lower	close
Conservation restrictions	yes	not enforced	mandatory	unknown in indigenous reserves	inadequate MOE	low	close

### PRIOR FUND EXPERIENCE

Despite a long history of conservation programming and investment in specific projects, Ecuador has limited experience in developing sustainable-finance mechanisms as compared to neighboring countries. FUNAG is the only viable, endowed conservation fund, and even it has a limited ability to cover the large assets it seeks to protect without increased funding or public-sector willingness to connect conservation with water quality by paying more at the meter. ECOFONDO and ECORAE offer good opportunities to designate terms and support for indigenous protected-area management funds, but, again, they require more political will and transparent management of revenue streams.

### NGO INVESTMENTS TO DATE

International conservation organization investments in Ecuador have been substantial but have only rarely sought to develop sustainable instrumentation to fund activities in perpetuity. Several major NGOs are investigating options for the development of funding mechanisms and several are keen to help indigenous federations have a stronger voice at the bargaining table. Although several NGOs have made important investments with USAID support, these investments have been at the microscale (working in particular protected areas with very small communities) or at the federation level to obtain policy improvements. There has been little systematic support for linking federations and their communities in a coherent way that helps

stimulate sustainable revenue streams for environmental or cultural service portfolios that are attractive to domestic and international players.

## **CORPORATE INVESTMENT IN CONSERVATION**

Corporate investment in indigenous conservation has been largely absent, though funding to the Huaorani could have been used for conservation had there been a transparent framework for setting priorities and distributing funds. ECORAE and ECOFUNDO have no explicit commitments to indigenous groups; as such, few resources have reached indigenous reserves. Both schemes are under intense media scrutiny for ignoring local needs, lacking accountability, and displaying a high degree of corruption. There is no evidence of a sustained effort by local or international conservation organizations to solicit corporate investors for indigenous conservation, particularly in CAIMAN-involved communities. Although the oil and gas sectors *should* be the most likely sources for conservation-endowment financing — particularly for indigenous reserves, which produce or transport the majority of Ecuador's oil and gas — poor planning during the development of these two funds and lack of accountability for their use have created an adversarial relationship that is not conducive to indigenous-reserve finance. Cement manufacturing, electrical utilities, food and beverage companies, and agriculture exporters have also failed to make significant contributions to conservation and have shown little interest in funding indigenous-reserve activities.

## **RECOMMENDATIONS**

Building on the findings included in the body of the report and the conclusions mentioned above, the following recommendations can help the CAIMAN team consolidate its experiences and develop sustainable-finance initiatives. Although many of the recommendations may be broader than what CAIMAN seeks to achieve, it is important to recognize that CAIMAN's support for indigenous reserves exists within a larger political and institutional context.

### **Consolidate Experience into Three or Four Pilot Projects**

CAIMAN has successfully helped build infrastructure and credibility for indigenous-reserve management over the past three years. Federation instability continues to pose challenges, but they are now better organized nationally and have begun to stimulate important local activities. Establishing three or four “success stories” over the remainder of the project will be critical in demonstrating sufficient management capacity and merchantable product; from there, several business plans and prospectuses may succeed in securing extra financing.

Several activities offer the best prospects for obtaining success stories and diversified financial support over the remainder of the project. Each project offers strengths in some combination of product development within established markets (forest products, carbon, tourism), improving the capacity to operate and maintain product flow, and garnering international-market credibility. The Gran Reserva Chachi activity may be a stretch, although its potential to improve international credibility

cannot be overstated. The team should carefully consider which of these can most realistically provide tangible, market-based goods and services, and select three or four for possible consolidation support:

- AWA Forest Certification/Mgt, San Lorenzo
- Conservation easement/incentive scheme (Awa/Reserva Vida)
- Ecotourism plan and market development (Awa/Reserva Vida)
- Gran Reserva Chachi — GTZ/CI/CAIMAN (ENDESA)
- Waorani Woman's Association agroforestry/handicrafts

### **Blend Local Contractor and International Expertise to Develop a Prospectus**

One of CAIMAN's greatest strengths has been its relationship with local service providers to build capacity at the federation level. Three or four organizations, such as FAN, have the capacity to conduct economic and financial analyses (e.g., break-even analysis, projected profit and loss statements, projected cash flows) of revenue streams from the pilot projects mentioned above. Realistic analyses of current goods and services flows, based on real or potential values, are a key first step in determining financial needs and scaling a business plan for possible investors. Partners or consultants performing financial and economic analyses should use net present value or internal rate-of-return calculations to determine business viability and sensitivity for various resource scenarios and lending requirements. There are numerous templates and suggested methodologies for conducting this analysis, including those found on the Conservation Finance Alliance Web site.<sup>22</sup>

Much of what CAIMAN and indigenous reserves can offer to local populations and global investors is well beyond current commodity markets. Most societal, environmental, and reputational benefits associated with indigenous-reserve conservation remain focused on "doing the right thing" and are well beyond traditional economic analysis. Although there has been an explicit emphasis on "market-based" valuation systems, many investors may continue to look for intangible values for the foreseeable future. Until political stability and adherence to rules of law and international doctrine are respected, more traditional financial investors are unlikely to enter the market CAIMAN has helped create.

After the target pilot projects are identified in collaboration with operators, precise terms of reference for a short consultancy to develop profit and loss statements should be developed. Ideally, the project should use a reputable accounting firm to team with an organization involved in natural-resource management (e.g., Jatun Sacha, Servicio Forestal Amazonico). Alternatively, the project could use a local service-provider with an organization experienced in endowment development, such as Fundecor in

---

<sup>22</sup> <http://guide.conservationfinance.org/chapter/index.cfm?IndexID=9>.

Costa Rica. Before conducting this analysis, the selected firm should contact members of the Conservation Finance Alliance and the individuals who have successfully developed prospectuses and endowments for protected-area systems in the Americas.<sup>23</sup> It would also be worthwhile to contact North American organizations that have worked specifically with establishing endowments and trust funds for indigenous communities, such as First Nations.

After a preliminary prospectus has been developed, CAIMAN should work closely with technical specialists in the Chemonics home office to match preliminary results with funders as early as possible. Steps include contacting the GEF and international NGO conservation funds and foundations, and initiating discussions with private environmental funds (such as EcoLogic or the Global Environment Fund). The team should also seek input from commercial banks subscribing to the Equator Principles<sup>24</sup> and multinational companies with affiliates in Ecuador, such as Dole, Coca Cola, and Caterpillar.

During the development of this year's work plan, the team should ensure adequate home-office support for marketing draft documents and concepts. The nature and presentation of the prospectus might merit peer review or a workshop to obtain feedback before finalization.

### **Improve Federation Collaboration with Territory Associations**

Beyond the pilot projects and prospectuses is the challenging but critical work of helping federations become better representatives of their members' interests. Federations can provide important visibility and political support for indigenous reserves, and their role in reducing risk and encouraging investors is important. Although the effectiveness of the national federations' advocacy work is above reproach, there is little federation support or interest in understanding local aspirations beyond organizing community demonstrations. Federations' unrealized potential are a liability for local funding initiatives.

Improving the federations' ability to efficiently manage grants will be key. The capacity of small community groups to absorb funds and their actual income needs are so small that it makes sense to create an efficient grant-management capacity at the federation level, provided it is geared to real needs. Many of the projects likely supported through an environmental fund would be in the \$10,000-\$20,000/year range, requiring high overhead costs unless federations properly structure administration and support. Dispersing and accounting for grants of \$300,000-\$400,000/year will require an administration capacity that can easily spend at least half that amount on overhead costs. Alternatively, strengthening confederations or the regional arms of specific federations may provide another method to efficiently distribute grants.

---

<sup>23</sup> Suggested individuals include: Carlos E. Quintela (Chemonics), Franz Tattenbach (FUNDECOR/CR), Lorenzo Rozensweig (FMNC/Mexico), Pedro Leitao (FUNBIO), and Ray Victorine (WCS/US).

<sup>24</sup> <http://www.equator-principles.com>.

## **Organize Study Tours and a National Indigenous-Reserve Finance Workshop**

Ecuador has not been as active as other countries in sustainable finance over the past 10 years. Subsequently, indigenous groups are likely far less familiar with financing instruments than other indigenous communities in the region. It makes sense to improve their awareness and appreciation of different tools through international conferences and meetings with organizations involved in developing similar financial packages.

Once a draft prospectus is developed and federation communities agree on a course of action, a series of field visits to countries with robust experiences in sustainable financing (such as Brazil, Chile, Costa Rica, and Mexico) would offer valuable opportunities and experience. Meetings in the Washington, D.C. area and Pacific Northwest with First Nations groups offer a second set of targets.

Although a national workshop is a fairly ambitious goal for the balance of the current project, it would be a laudable closeout activity. Bringing together public, nongovernmental, and commercial stakeholders from Ecuador and elsewhere could help improve understanding of local and global market interests. A forum drawing on experiences from other Andean, Amazonian, and Mesoamerican countries — and specifically focusing on sustainable finance for indigenously managed protected areas — is long-overdue for the region.

## **Employee-Livelihood Parameters**

Labor and cash-income requirements for most communities within the Huaorani, Awa, and Cofán reserves are limited and out of sync with many of the parameters of project success in USAID’s current results framework. The remoteness of most communities and their lack of tangible assets limit the ability and desirability of the income and employment model. Livelihood diversity, and its inherent flexibility and resiliency, should be part of the CAIMAN strategy. More attention to nutritional indicators and educational improvements are warranted. Identifying how households collaborate and share resources and collective access to land improvements may provide better measures for social-capital formation. Improved understanding of coping strategies, disposable-asset accumulation or depletion, and availability of remunerable labor should be considered. Developing impact indicators and quantifiable results that will satisfy USAID should be carefully reviewed and revised using a sustainable-livelihoods approach.

Project designers were careful to emphasize territorial consolidation and technical capacity building at the federation level, and the project team is aware of the importance of building managerial and administrative capacity at the local level. Both of these things must be done before securing additional sustainable indigenous-reserve finance.

Intergenerational value is hindered by an inability to convert natural-resource assets to income-generating activities without loss of cultural identity or nutritional safety net; inability to convert current assets to other values; and limited ability to substitute limited assets for activities.

Using a sustainable-livelihoods and income-diversification methodology that focuses on collective communities (rather than individual families) would provide a clearer picture of the impact of activities on project participants. It is important to look beyond traditional household economic theory to the practices that govern the sharing of resources in indigenous communities.



Waorani women's groups have very clear ideas on the value of forests and their livelihood needs that defy partial budget analysis and the simple need to earn more income.

## Other Recommendations

*Mainstream indigenous conservation in all Strategic Objective Teams.* CAIMAN is the only USAID/Ecuador initiative directly focused on indigenous reserves. Although this is understandable given the project's conservation roots, the project is not supported by broader USAID commitments to democracy and governance and rural-enterprise development. The civil-society aspects of CAIMAN activities could support and be supported by other USAID activities. Increasing sustainable financing for indigenous territories is largely dependent on their ability to form collectives capable of enforcing rule of law. This can provide an important stabilizing effect on large geographic areas contiguous with intractable transboundary issues, particularly with the Awa and Cofán territories.

USAID local-government activities can support organizational capacity building within indigenous organizations, and the judicial-reform program can ensure rule of law within indigenous territories. USAID's economic-growth program — including activities supporting cooperative development, access to microfinance, and trade competitiveness — could also provide support for indigenous communities responsible for protected-area management. Finally, more explicit attention to indigenous communities surrounding key biodiversity assets in the Northern Zone could help stabilize resource use and access and create an environment more conducive to external investment in indigenous reserves. USAID could have a more significant impact by explicitly including indigenous peoples in all project activities.

*Develop an integrated water-management or clean-production Strategic Objective (TLC/FTA).* Given the broader market structure and lack of incentive for local or foreign investment in indigenous reserves, as well as FONAG's emerging experience in watershed management, USAID/Ecuador could consider a targeted, integrated water-management approach. USAID's current support for water and sanitation in the Northern Zone could provide a bridge that could tie upland land use within indigenous reserves to municipal water supplies. Replicating the FONAG experience in secondary cities adjacent to indigenous reserves and national parks, with benefits accruing directly to communities, may be the best way to incentivize stewardship change.

*Consider endowing indigenous federations.* Federations have made solid but uneven organizational progress at the central level, with more modest success at the local and confederation levels. Building strategic-planning, managerial, and administrative excellence and implementation skills will require more time and effort, and are likely beyond the patience and resources of USAID. While TFCA funds appear to be unavailable, USAID and project staff should identify possible foundations or other Global Development Alliances that could increase long-term endowment to cover operational and maintenance requirements. "Bundling" multiple local requirements through a federation endowment may make sense, provided that demand for projects from regional communities can be transparently negotiated and transactionally assured.

*Inter-donor support for a 'pausa ecologica' to establish the National Forest Control System (SNTCF).* Field interviews revealed general agreement that lack of forest regulation had become chronic and debilitating to investment in forests. Standing forest-value and mill-gate prices remain so low that working forest land is disappearing at an alarming rate, estimated at between 75,000-400,000 hectares/year. In 2004, ITTO released a report<sup>25</sup> detailing necessary institutional and policy reforms necessary to fortify forest management and encourage investment. The reforms followed similar changes enacted in Bolivia, and more recently in Colombia, where fiscal responsibilities and technical oversight are separated through establishment of "Regencia Forestal." This amounts to the outsourcing of SNTCF, which was enacted in 2004 with the award of a contract to Swiss company SGS to verify the effectiveness of the Regencia. The "Vigiliencia Verde" (an amalgamation of environmental and legal regulators) was conscripted to monitor the transportation of wood as depicted in Table 4.2.

However, legal challenges to the governments ability to enter into such an agreement reversed the contract with SGS undermining the new system. The elaboration and eventual collapse of the SNTFC has further eroded confidence in Ecuador's forest sector and sent clear signals to investors and communities about the probability of success in sustainable forestry.

---

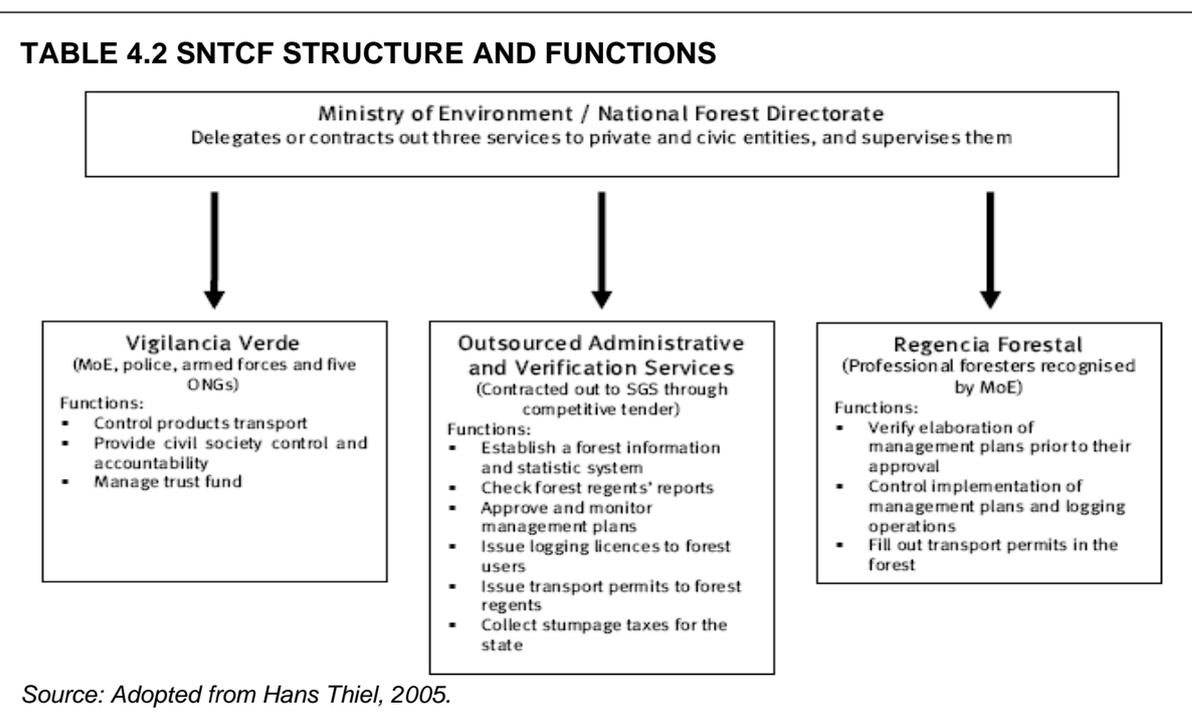
<sup>25</sup> International Tropical Timber Organization. 2004. "Consecución del objetivo 2000 y la ordenación forestal sostenible en Ecuador."

It would seem that it would be in all donors and broader civil society groups to support the enactment of a meaningful and enforced “pausa ecologica” which would fundamentally bring the forest industry and rogue timber operators back to the table. Strengthening weak inter-donor and interagency cooperation to support such a hiatus is perhaps the only way to bring some rationality to the forest sector without which other land issues, including protected area management, will ultimately fail.

*Insure indigenous involvement in CEFOVE.* Ecuador’s National Forest Certification Group (CEFOVE) has developed an important national presence in establishing standards for forest certification that conform to international standards (such as those of the FSC). CEFOVE has made excellent progress harmonizing the principles and criteria of FSC standards and has begun to build capacity for their implementation. Adherence to such standards has become a requirement in most forest-exporting countries and conformance capacity will partially determine Ecuador’s competitiveness.

CEFOVE has provided support to indigenous communities through certification workshops and has recently begun working with federation leaders to establish a “Camara Forestal Indigena,” which could be very beneficial. CAIMAN should work with CEFOVE to insure that awareness and capacity building for forest certification is included in our activities.

CEFOVE has also begun to explore study tours and exchanges with other indigenous Amazon groups to introduce Ecuadorian communities to successful forest-certification efforts. These activities are consistent with USAID’s new Amazon Basin Conservation Initiative and would provide excellent returns on CAIMAN’s activities.





## ANNEX A: CONTACT LIST

NAME	TITLE	ORGANIZATION
Paulina Baca	National Coordinator	CEFOVE
Maria Helena Jervis	Executive Director	FUNAN
Alex Leguizamo	Productive Systems	FUNAN
Hans Thiel	President	CIFOP
Yolanda Kakabadse	Yolanda Kakabadse	FFLA
David Thomas	Forestry Advisor	Fundación Jatun Sacha
Paulina Arroyo	Parks in Peril Manager	TNC
Samuel Sangueza	Executive Director	FAN
Fernando Montenegro Sanchez	Executive Director	Fundación Forestal — Juan Manuel Durini
Catherine Cassagne	Biodiversity Projects Officer	International Finance Corporation
Ray Waldron	Assistant Mission Director Operations and Support	USAID/Ecuador
Luis Fernando Jara	Program Manager	Profafor
Mauricio Castillo	Project Coordinator	WCS
Esteban Suárez	Ecuador Director	WCS
Anthony Stocks	Professor	Idaho State University
Evan Bloom	Vice President Capacity Building	PACT
Douglas Mason	Director, Biodiversity Programs	USAID/Ecuador
Jill Kelly	Natural Resource Officer	USAID/Ecuador
Monica Zuquilanda	Cognizant Technical Officer	USAID/Ecuador
Luis Suarez	Executive Director	Conservation International
Jaime Cevallos	Projects Coordinator — Chocó Manabí Corridor	Conservation International
Aaron Bruner	Director of Conservation Incentives and Protected Areas Financing	Conservation International
Jasón Coles	South America Grants Director	Critical Ecosystem Partnership Fund/Conservation International
Michele Zador	Mesoamerica Grant Director	Critical Ecosystem Partnership Fund/CI
Joao de Queiroz	Chief of Party	CAIMAN
Walter Palacios	Deputy Chief of Party	CAIMAN



# ANNEX B: SCOPE OF WORK

## **Chemonics International**

### **Biodiversity Conservation in Indigenous Areas (CAIMAN) Project**

#### **Terms of References for Senior Natural Resource Management [NRM] Specialist**

##### **I. Assignment Name and Purpose**

The senior NRM specialist will conduct an internal review of progress and planning of activities in CAIMAN's conservation-finance result area.

##### **II. Introduction**

The purpose of the CAIMAN project, which is financed by USAID and implemented by Chemonics International, is to conserve biodiversity in the Awa, Cofan, and Huaorani territories because indigenous groups and territories can constitute a first line of defense against biodiversity loss. However, indigenous groups require assistance to support their territorial integrity, capacity-building needs, and financial sustainability. CAIMAN works toward these goals as part of USAID/Ecuador's Strategic Objective 1 efforts to respond to these needs and to enhance political, economic, and social stability in this increasingly troubled region.

The indigenous nationalities that CAIMAN works with participate actively in the design, planning, and implementation of the activities supported by the project. To implement technical activities, CAIMAN establishes subcontracts and grant agreements with NGOs, consultant companies, and individual consultants.

The main partners of CAIMAN are three indigenous federations: Federación de Centros Awa del Ecuador (FCAE); Federación Indígena de la Nacionalidad Cofán del Ecuador (FEINCE) and Organización de Nacionalidades Huaorani de la Amazonía Ecuatoriana (ONHAE). Regarding institutional strengthening, CAIMAN works with PACT, an American NGO that specializes in establishing community microenterprises. Other important partners are the Fundación Altropico (Awa nationality) and the Fundación para la Supervivencia Cofán (Cofan nationality).

Ecuador provides significant opportunities for the conservation of biological diversity on a global scale. Much of this biodiversity is concentrated in the northern border and Amazon Basin provinces, forming an arc from Esmeraldas to Pastaza. However, these unique resources are now under increasingly serious threat. CAIMAN's work on USAID/Ecuador's Strategic Objective 1 serves to "conserve biodiversity in selected protected areas and their buffer zones," in compliance with the Environment Support Program of USAID/Ecuador.

### **III. Background**

Ecuador is unquestionably a top priority for global biodiversity conservation. Though it has less than one-fifth of one percent of the earth's land area, Ecuador may have more biological diversity per unit area than any other country on Earth. The country hosts a staggering number of species and is considered the richest and most biodiverse hotspot on Earth. This exceptional biological richness is well represented in an arc along its northern border, bending down into the Amazon Basin provinces to the east and southeast. Although indigenous peoples groups manage much of this diversity, these poor and often dispersed populations need additional support.

### **IV. Assignment Objective**

The senior NRM specialist will work with the chief of party (COP) to assess results to date in conservation financing. More importantly, he will apply his knowledge of conservation easements and land trusts and investigate options such as biodiversity offsets and "adopt-a-hectare" schemes. The senior NRM specialist will provide specific guidance for CAIMAN's upcoming work plan for FY2006 and FY2007 (an 18-month period).

### **V. Scope of Work and Activities**

1. In cooperation with the COP, review CAIMAN activities to date with emphasis in areas related to sustainable financing for CAIMAN beneficiaries.
2. Identify and discuss with the COP lessons learned in conservation financing in similar settings in the region and more broadly around the world. Schemes to be examined for applicability to CAIMAN may include conservation easements, land trusts, biodiversity offsets, and "adopt-a-hectare" programs, among others.
3. As appropriate, travel outside of Quito to ground-truth potential interventions in conservation finance.
4. Attend a meeting with USAID Environment team in Ecuador.
5. Attend a meeting with The Nature Conservancy and other environmental NGOs regarding "schemes" for sustainability in Ecuador.

## **VI. Time Required**

The time required to complete the consultancy will be no more than 12 days of LOE, including travel. Six-day workweeks are authorized while on assignment in Ecuador. Days will be broken down as follows:

- One day in the Chemonics home office, reviewing reports and preparing for the trip.
- Ten days in Ecuador working with the CAIMAN COP, including two travel days.
- One day in the Chemonics home office, writing trip deliverables.

## **VII. Estimated Dates and Location**

The consultancy should begin on or about July 10, 2005. The work will be carried out in Quito, Ecuador, and Washington, D.C.

## **VIII. Reporting**

While conducting the assignment, the consultant will report to CAIMAN Chief of Party Joao Queiroz or any person appointed by Mr. Queiroz.

## **IX. Deliverables**

- Written summary of one or more proposed conservation-finance activities for inclusion in CAIMAN's work plan.
- Trip report summarizing meetings, primary activities, findings, and recommendations for follow-up.