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HELPING INDIGENOUS NATIONALITIES IN ECUADOR CONSERVE THEIR TERRITORY AND CULTURE

Conservation in Indigenous Managed Areas Final Report

APRIL 9, 2007

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TROPIC JOURNEY'S IN NATURE / LAURENT ATTILA

Waorani children lead a healthy, happy life in their territory. But rapid change on their land means their world will change drastically in their lifetime. CAIMAN worked to help the Waorani and other indigenous groups navigate this transition while maintaining key cultural elements and conserving territory.

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CAIMAN / IAN STACHIN DE QUIROZ

This Cofán girl and other indigenous children are caught between two cultures as Western society increasingly affects traditional ways of life. CAIMAN sought to empower indigenous peoples to conserve their culture for the benefit of all.

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FRONT COVER: The Waorani stand up for indigenous rights in Quito. CAIMAN helped the Waorani resolve long-standing conflicts with neighbors by legally defining extensive segments of their territorial boundaries.

TROPIC JOURNEYS IN NATURE

BACK COVER: From the Amazon looking up into Ecuador's Andes. Many of Ecuador's indigenous territories are in a unique transition area between the mountains and low-lying areas; these highly biodiverse lands face increasing environmental and cultural threats.

TROPIC JOURNEYS IN NATURE / LAURENT ATTILA

TROPIC JOURNEYS IN NATURE / LAURENT ATTLA



The giant Amazonia otter is an endangered species. CAIMAN's work with indigenous peoples in Ecuador helped to reduce threats to this environmentally sensitive part of the world.

ACRONYMS

AMWAE	ASSOCIATION OF WAORANI WOMEN OF THE ECUADORAN AMAZON
ECOFONDO	ECOLOGICAL FIDUCIARY FUND
ECOLEX	ENVIRONMENTAL MANAGEMENT AND RIGHTS CORPORATION
FCAE	AWÁ COMMUNITY FEDERATION OF ECUADOR
FECHE	CHACHI COMMUNITY FEDERATION OF ESMERALDAS
FEINCE	COFÁN INDIGENOUS FEDERATION OF ECUADOR
FSC	COFÁN SURVIVAL FOUNDATION
GTZ	GERMAN AGENCY FOR TECHNICAL COOPERATION
MAE	MINISTRY OF ENVIRONMENT
OISE	INDIGENOUS SECOYA ORGANIZATION OF ECUADOR
ONWAE	ORGANIZATION OF THE WAORANI NATIONALITY OF ECUADOR
VIHOMA	LIFE, MAN, AND ENVIRONMENT FOUNDATION



VIHOMA / PABLOYEPEZ

The Secoya are renowned for their knowledge of the land, which is home to some of the world's ecological treasures. As the number of shaman like these dwindle, humankind risks losing the knowledge they have developed over many generations. CAIMAN worked to strengthen indigenous capacity to conserve their cultural traditions.

EXECUTIVE SUMMARY

The loss of biodiversity is one of the world's most pressing challenges. The huge demand and limited resources for conservation in tropical areas require carefully considered investments, and Ecuador's indigenous territories are an important part of USAID's conservation portfolio.

Ecuador is one of the most biodiverse countries in the world, and its indigenous nationalities have ancestral claims over nearly five million hectares. The country's natural and cultural treasures are also among the most threatened — its annual deforestation rate of 1.7 percent is the highest in Latin America, and the increased presence of oil companies will add to environmental pressures in indigenous territories. In response to this urgent need, USAID created CAIMAN, the Conservation in Managed Indigenous Areas Project. The four-and-a-half-year,

\$9.5 million activity, implemented by Chemonics International, helped indigenous people to effectively deter relentless threats to biodiversity.

For much of its work, CAIMAN partnered with indigenous federations and nonprofit organizations, which received a variety of grants and subcontracts to perform project activities. These funds also built the organizations' accountability and capacity to manage contracts. Over the life of the project, CAIMAN issued grants to indigenous organizations for a total of nearly \$1.8 million.

The project also allied with several large international NGOs: Pact, the Wildlife Conservation Society, and Conservation International. CAIMAN also worked closely with the Ecuadoran Ministry of Environment, National Agrarian Development Institute,

National Council for Women, and Council for Nationalities and Peoples of Ecuador.

CAIMAN's work toward biodiversity conservation had three primary objectives: secure and maintain indigenous territorial rights, increase indigenous capacity for conservation, and achieve sustainable financing.

Territorial rights.

CAIMAN tackled the complex issue of territorial boundaries, ultimately delimiting more than 500 kilometers of indigenous territory. More importantly, the project brokered resolutions to long-standing conflicts between neighboring indigenous groups and colonists. CAIMAN and its partners delimited and demarcated boundaries, strengthened indigenous rights to ancestral lands, facilitated legal reforms to increase the ability of indigenous peoples to protect their land, and physically protected boundaries and resources.

Capacity for conservation.

CAIMAN and its partners provided capacity-building support and hundreds of training events on a wide range of topics. Sessions on environmental impact assessments, forest management, conflict resolution, finance and administration, strategic planning, legal skills, and handicrafts increased individual capacity and strengthened indigenous institutions.

Financing.

Conservation initiatives often fail without permanent sources of funding; projects must find

a way to pay for conservation and make conservation pay. CAIMAN addressed this issue on three fronts: helping people engage in income-generating activities that are conservation-friendly, teaming with conservation-oriented NGOs to establish financing mechanisms, and improving indigenous communities' ability to feed themselves.

CAIMAN also established microcredit schemes and sponsored conferences about the link between indigenous cultures and conservation. The project also published numerous books and manuals about its findings.

Measuring actual changes in biodiversity over the vast areas and short timeframe of the project was not possible, so CAIMAN judged its results on the reduction of threats to biodiversity. By developing indicators that measured indigenous control of territory and the management and institutional capabilities of indigenous federations, CAIMAN can reasonably infer its benefits to biodiversity.

CAIMAN's work yielded a wealth of lessons learned, many of which challenge widely held views. The project found, for example, that the concept of "community," as conceived of by outsiders, has limited application to some indigenous peoples, so productive activities should focus more on the family unit. Traditional economies that rely on communal resources are not easily compatible with profit-motivated enterprises, so creative approaches are needed for income genera-

tion. Variations in ethnically and culturally defined indigenous groups require iterative, flexible approaches to project implementation, as no one approach fits all situations. And increased income and market participation is not synonymous with improved livelihoods — market-oriented activities must include educational components.

The ecological and cultural integrity of Ecuador's indigenous territories will continue to be threatened, so it is critical that the project's work continue. CAIMAN's achievements in territorial consolidation, capacity for conservation, and sustainable financing recommend actions that are both critical and achievable.



© CAIMAN / DAVE GIBSON

An elder Waorani woman extracts fiber from the chambira palm while traveling by boat to her agricultural plot. The fiber is used in a variety of handicrafts; CAIMAN worked to link her and other artisans' work to the market, increasing their income.

CHAPTER ONE

THE PROJECT

INTRODUCTION

The loss of biodiversity is one of the world's most pressing challenges. The problem is vast, and as global demand for natural resources and agricultural products grows, so will the threats to biodiverse ecosystems. Nowhere is this more evident than in the tropical forests of South America.

The importance of tropical forests goes well beyond biodiversity. With rainforests go entire cultures and their vast stores of indigenous knowledge about the environment. The cost of this loss is incalculable.

The huge demand and limited resources for conservation in tropical areas require carefully

considered investments. USAID identified Ecuador's indigenous territories as an important strategic target within its conservation portfolio. Besides having ancestral rights over huge tracts of pristine forest, indigenous lifestyles are largely compatible with biodiversity conservation. These indigenous nationalities¹ have ancestral claims over nearly five million hectares,² and the country is among the most biodiverse in the world. In fact, Ecuador has the world's highest number of vertebrate species per unit of area.³

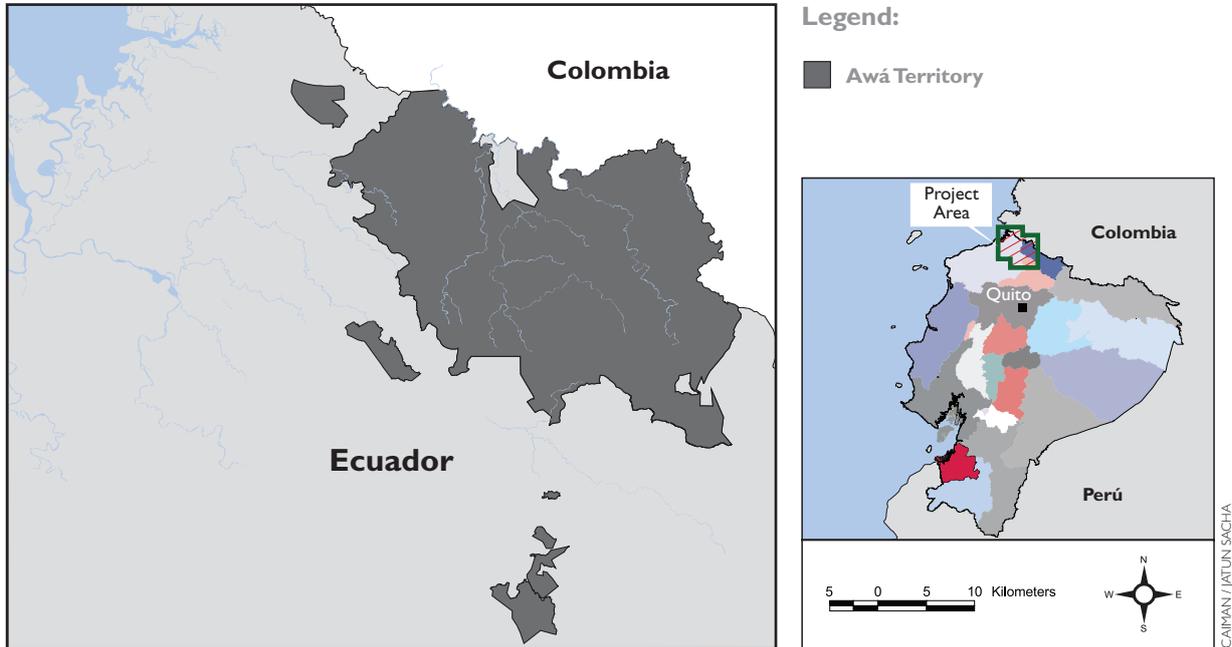
Unfortunately, the country's natural and cultural treasures are among the most threatened in the world, and its annual defor-

1 The distinct indigenous groups in Ecuador refer to themselves as "nationalities." Herein, "indigenous peoples" and "nationalities" are used interchangeably for linguistically and culturally distinct groups.

2 Palacios, W., and J.L. Freire. 2004. "Recursos forestales y territorios indígenas en Ecuador." *Memorias del I Encuentro Andino de Derecho Ambiental Forestal con Enfoque Comunitario*. October 13-15, Quito. Centro Ecuatoriano de Derecho Ambiental.

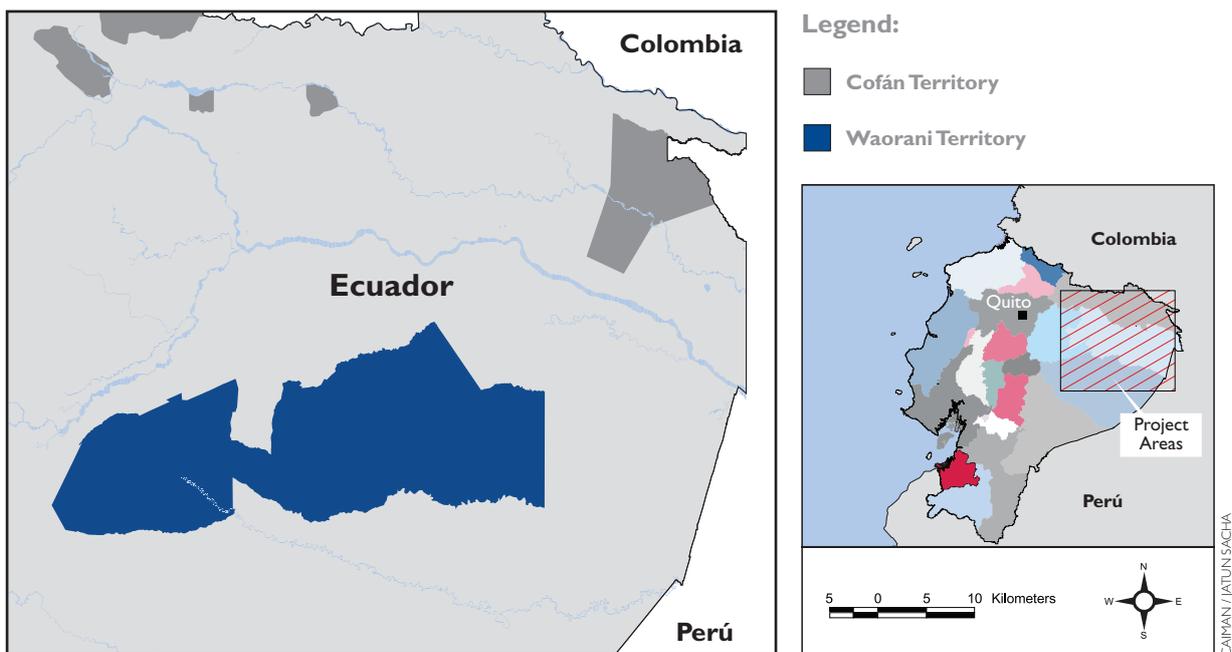
3 Mittermeier, R. A., Robles, P., and C.G. Goettsch. 1997. "Megadiversity." CEMEX-Conservation International, Canada.

MAP 1. The Awá Territory



The location of CAIMAN's ethnogeographic focus areas. In addition to the Awá (above) and Cofán and Waorani (below), CAIMAN also worked with the Chachi and Secoya.

MAP 2. The Cofán and Waorani Territories



estation rate of 1.7 percent is the highest in Latin America. Ecuador loses an estimated 198,000 hectares of forest per year.⁴ The Conservation in Indigenous Managed Areas Project, CAIMAN, was created to help indigenous people effectively deter relentless threats to biodiversity. CAIMAN, a four-and-a-half-year, \$9.5 million activity, was supported by USAID and implemented by Chemonics International. USAID's alternative development program supported territorial consolidation activities.

ETHNOGEOGRAPHIC PRIORITIES

CAIMAN initially focused on three indigenous groups: the Awá, Cofán, and Waorani. In the second year of implementation, the project expanded to include the Secoya and Chachi territories and six Kichwa communities in Yasuni National Park.

The Awá

The estimated 4,500 Awá own 120,000 hectares near the Colombian border in the Chocó region. Their territory covers portions of the northern provinces of Esmeraldas, Carchi, and Imbabura. The Chocó is one of the most biologically rich yet threatened ecosystems in the world.⁵ It hosts more restricted-range birds than any ecosystem in the Americas;⁶

accordingly, it was named a high-priority region in WWF's Global 200 analysis⁷ and is considered a biodiversity hotspot by most conservation organizations.

This biological treasure is under intense pressure from oil palm companies and land and timber traffickers. The Awá have few income-earning opportunities and are among the poorest people in the world. Besides protecting their territory and way of life, the Awá consider health and education to be their development priorities. The Awá Community Federation of Ecuador (FCAE)⁸ unites the 22 legally recognized communities in the Awá territory.

The Cofán

Approximately 1,000 Cofán live in five territorial units — Durero, Duvuno, Sinangoe, Zavalo, and Cofán Bermejo — along the Aguarico River in Ecuador's northern province of Sucumbios. Their land covers approximately 350,000 hectares along the eastern slopes of the Andes and adjacent low-lying areas. Because of its range of topography and climate, the Cofán territory is biologically and geomorphologically diverse.

The vast majority of the Cofán territory is in Ecuador's National Protected Areas System. For these

4 The Economist Newspaper Ltd. 2006. "Pocket World in Figures." Profile Books Ltd., London.

5 Dinerstein, Eric et al. 1995. "A Conservation Assessment of the Terrestrial Ecoregions of Latin America and the Caribbean." World Bank: Washington, D.C.

6 Stattersfield, Alison J. et al. 1998. "Endemic Bird Areas of the World: Priorities for Biodiversity Conservation." Birdlife International: Cambridge, United Kingdom.

7 Worldwide Fund for Nature. 1997. "Global 200 Ecoregions." WWF: Washington, D.C.

8 Indigenous federations are indigenous organizations that encompass indigenous communities, families, and clans. They are referred to as "second order" organizations, in contrast with communities, which are considered "first order," and regional-level confederations, considered "third order" organizations that unite the federations.



VHOMA / PABLO YEPÉZ



VHOMA / PABLO YEPÉZ



VHOMA / PABLO YEPÉZ

CAIMAN strengthened Ecuadoran indigenous groups' ability to protect threatened animal and plant species.

TOP: The Amazon hosts a large number of mushroom species.

CENTER: *Callithrix pygmaea* is the smallest of 20 species of primates in Ecuador's tropical forests. Their specialized diet and feeding habits make them highly endangered.

BOTTOM: *Ameerega bilinguis* is one of many species of poisonous frogs in the Amazon.

Members of an Awá household from Pambilar. The woman is holding handicrafts that she sells for household income. CAIMAN helped Awá and other indigenous artisans to hone their skills and preserve their traditional handicrafts.

CAIMAN / JOAQUÍN DE QUIROZ



holdings, the Cofán have secured certain management rights and responsibilities through a variety of agreements with the Ministry of Environment (MAE).

The Cofán have long felt the negative impacts of oil exploration and extraction. In 1966, Texaco sunk a well near Durano, and subsequent oil-related activities contaminated the soil and water. According to the Cofán, this contamination has led to an increase in a number of diseases, including various types of cancer. Today the Cofán resist oil-related activity in their territory and prefer the sustainable use of natural resources. Nonetheless, like other indigenous groups in the region, the Cofán are cash-poor.

The Cofán are well-known for their knowledge of medicinal plants and their exquisite handicrafts. They are represented by the Cofán Indigenous Federation of Ecuador (FEINCE) and receive technical support from the Cofán Survival Foundation (FSC).

THE WAORANI

An estimated 2,600 Waorani live in approximately 900,000 hectares of rainforest between the Curaray and Napo rivers. Of these, the Waorani have title to 790,000 hectares, including portions of the provinces of Pastaza, Orellana, and Napo. At least three Waorani communities are in Yasuni National Park. A 2006 presidential decree delimited a 780,000-hectare “intangible zone,” including part of the Waorani territory and Yasuni National Park, restricting economic activity to protect the Tagaeri and Taromenane clans of the Waorani.

Seven international oil companies are currently operating in Waorani territory; conflicts with Waorani communities are frequent and often settled through promises of gifts or cash. Oil roads have opened access to the territory and increased its vulnerability to outside pressures. Besides oil, illegal logging is a major threat to the integrity of the Waorani territory and culture.

The Waorani are represented by the Organization of the Waorani Nationality of Ecuador (ONWAE).

The Secoya

Approximately 400 Secoya share 42,000 hectares with the Siona and neighbor the Cofán along the Aguarico River in Succumbios. Because there are few economic opportunities, the Secoya have turned some of their territory into cattle pasture and occasionally sell timber. Oil palm plantations abut the territory, and there is much pressure to convert rainforest into more plantations. The Secoya are represented by the Indigenous Secoya Organization of Ecuador (OISE).

The Chachi

The 8,000 or so Chachi occupy three distinct zones in Esmeraldas in the Northwest. CAIMAN worked with Chachi communities along the Cayapas River and in the low-lying coastal Mache-Chindul reserve. Territory along the Cayapas is under intense pressure by timber middlemen — Chachi in the Mache-Chindul have to fight off land traffickers and colonists. The Chachi are talented weavers and woodcarvers and are represented by the Chachi Community Federation of Esmeraldas (FECICHE).

GOAL AND OBJECTIVES

CAIMAN's overarching objective was biodiversity conserva-



VIHOMA / PABLO YEPÉZ

The Aguarico River, home to the Cofán and Secoya. There are between 900 and 1,000 Cofán and between 400 and 500 Secoya in Ecuador.

Elder Cofán women transmit increasingly threatened cultural values and skills to younger generations, particularly with respect to handicrafts, agriculture, and child rearing.

CAIMAN / WALTER PALACIOS





TROPIC JOURNEYS IN NATURE / LAURENT ATTILA

Waorani hunter. The blow gun is still widely used in the Waorani territory, where game is still relatively plentiful. The Waorani hunt a broad spectrum of animals and also fish. Their favorite game animal is a large primate called the chorong monkey.

tion. As shown in the results framework in Figure 1, biodiversity conservation in indigenous territories will be achieved by consolidating territorial rights, developing capacity for conservation, and achieving sustainable financing. This explicitly links biodiversity to people.

IMPLEMENTATION APPROACH

Figure 2 represents CAIMAN's implementation in budgetary terms. The graph presents the percentages of total budget spent on seven categories: 1) local organizations (NGOs and firms); 2) large international NGOs; 3) salaries and benefits for CAIMAN office personnel, including the long-term expatriate chief of party; 4) collaborating-country consultants; 5) international consultants, including U.S. and third-country nationals; 6) other costs, including travel, office materials and equipment, local staff fringe benefits, and expatriate allowances; and 7) general and administrative costs.

The project used a variety of mechanisms to secure the services and products it needed. These included cost-reimbursement grants, fixed-obligation grants, subcontracts, direct purchases of materials and equipment, and personal services contracts.

CAIMAN spent 48.8 percent (\$4,629,372) of its budget (Annex A) on grants and subcontracts with local organizations. CAIMAN worked with 31 local firms, NGOs, and grassroots organizations, whose grants and subcontracts ranged from \$3,500 to \$350,000 (Annex B). This approach proved to be very fruitful. The increased institutional capacity and ability to leverage CAIMAN funds harnessed \$1,823,720 (\$897,344 in 2006-2007 and \$926,376 in 2004-2005) in complementary funds from partner organizations.

Indigenous federations were CAIMAN's principal partners and beneficiaries. CAIMAN's grant agreements with indigenous organizations totaled \$1,745,566, or 18 percent of the budget. Most

A long apprenticeship is required to become a shaman. Like many aspects of indigenous culture, shamans are facing pressures from the outside world. CAIMAN sought to build indigenous capacity to fend off cultural and environmental threats.

VIHONA / PABLO YEFEZ



of this was disbursed through cost-reimbursement grants, which, as explained below, were also used to build capacity.

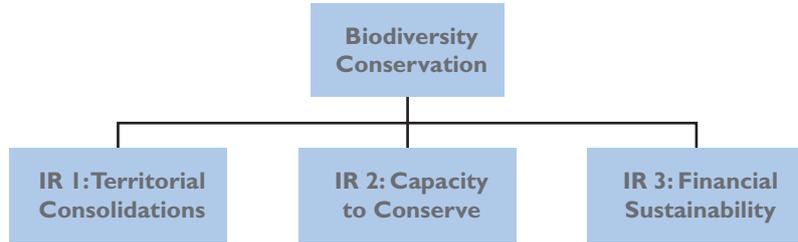
The use of international consultants, amounting to two percent of the budget, was most pronounced at the outset of the project when the first work plan was developed. As CAIMAN became more familiar with Ecuador's institutional landscape, the need for international consultants declined. The use of Ecuadoran consultants was important, particularly in ecotourism, but consumed less than one percent of the total budget.

CAIMAN formed strategic alliances with large international NGOs, entering into subcontracts and grant agreements with three: Pact (a member of Chemonics' BIOFOR IQC consortium), the Wildlife Conservation Society, and

Conservation International. In total, CAIMAN spent \$615,417 (7 percent) of its budget on subcontracts and grant agreements with such groups, and 94 percent of this was subcontracted to Pact.

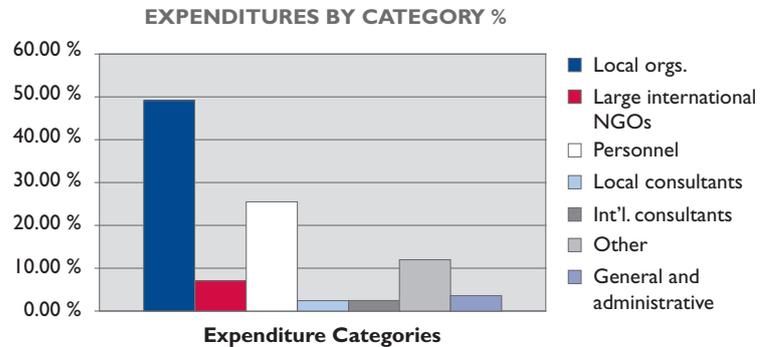
When CAIMAN began, USAID did not have a strategic objective agreement with a counterpart institution in the Ecuadoran government. Nonetheless, CAIMAN maintained close contact and collaborated with the MAE. CAIMAN also worked with the National Agrarian Development Institute, National Council for Women, and Council for Nationalities and Peoples of Ecuador. These relationships were tested by many changes in administration: over the course of the project, a new president took office and there were numerous ministers of environment and directors of the agrarian institute. Turnover was

FIGURE 1. CAIMAN'S RESULTS FRAMEWORK



Source: USAID

FIGURE 2. CAIMAN'S EXPENDITURES CLASSIFIED INTO BROAD CATEGORIES



Source: CAIMAN

even greater at the provincial and local levels, where some directors changed after only a few months.

THE COMPETITIVE SMALL GRANTS PROGRAM

An integral part of CAIMAN was its competitive small grants program, which held rounds in 2003-2004 and 2005-2006. CAIMAN set a maximum grant value of \$12,000 for proposals on the project's themes. However, proposals were accepted from all indigenous territories in Ecuador's tropical forest areas and buffer zones.

CAIMAN invited more than 100 organizations to apply to

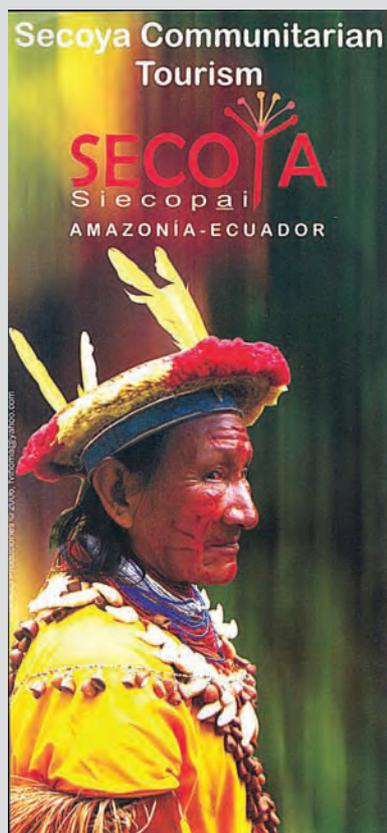
each grant cycle. A technical review panel evaluated and selected proposals under pre-established criteria. Once selected, CAIMAN negotiated grant budgets based on local costs.

Prior to first disbursement, CAIMAN reviewed the organization's financial management system. When these were deficient or nonexistent, CAIMAN helped establish accounting procedures appropriate to the size of the grant and the maturity and size of the organization. A total of 21 competitive small grants were granted, for a total of \$213,000. Grants ranged from \$1,630 to \$12,000.⁹

⁹ The sole exception was a \$15,856 grant.

SUCCESS STORY

Grants Program Exceeds Expectations



With VIHOMA's assistance, the Secoya have initiated a community-based tourism activity that has attracted the attention of important tour operators in Ecuador.

CAIMAN's Competitive Small Grants Program produced results beyond its original expectations. The program highlighted and consolidated small, relatively unknown organizations that had long histories with indigenous groups. Many of these organizations used CAIMAN grant funds to secure complementary funds from other sources; in the process, they improved their management systems to spend the funds responsibly and transparently. As a result, many grantees exceeded the results outlined in their grant proposals.

The Life, Man, and Environment Foundation (VIHOMA) was established in 2001 by social and natural scientists working with the Secoya. VIHOMA secured funding from both CAIMAN grant cycles. With the first \$12,000 grant, VIHOMA and the Secoya built a traditional house, established a two-kilometer self-guided trail with 800 labeled specimens, and published a book on Secoyan ethnobotany. Using this experience and a second \$12,000 grant, VIHOMA secured an additional \$40,000 from ECOFONDO to establish a traditional Secoya garden and ceremonial house, build an observation tower, promote its ecotourism offerings, and publish a second book, "Walking the Trail: Towards Environmental Conservation and the Secoya Culture."

Another success was the Ecuadoran Service for Conservation and Sustainable Development Foundation, founded in 2005 as an outgrowth of a GTZ program in the Chachi territory. The foundation works to conserve tropical rainforests by helping to manage natural resources, with a focus on development in indigenous and Afro-Ecuadoran communities. In 2006, the foundation secured nearly \$12,000 from CAIMAN to strengthen an Onzole River commune's sustainable forest management and direct timber commercialization. Since then, the foundation has received more than \$1,600,000 in grants and contracts from the European Union, GTZ, and the Inter-American Development Bank, among others.

CHAPTER TWO

TERRITORIAL CONSOLIDATION: SECURING AND MAINTAINING ANCESTRAL TERRITORIAL RIGHTS

ESTABLISHING BOUNDARIES AND MITIGATING CONFLICTS

CAIMAN tackled the complex issue of territorial boundaries, ultimately delimiting hundreds of kilometers of indigenous territory. More important, though, was the project's work to resolve conflicts between neighboring indigenous groups and colonists, who for decades disputed boundaries that are now accepted by all.

CAIMAN worked on four fronts: 1) delimit and demarcate territorial boundaries, 2) strengthen territorial rights, 3) facilitate legal reforms to increase the ability of indigenous peoples to protect their territories, and

4) physically protect boundaries and resources.

CAIMAN first identified boundary segments most vulnerable to external pressures and lacking appropriate legal tenure. The project and its partners then facilitated a dialogue between all involved parties, using existing legal documents and consultations with elders to form agreements about ancestral boundaries. With agreed-upon boundaries, all parties signed notarized, binding agreements of good neighborliness and mutual respect — 38 such agreements were signed over the life of the project. Field crews from both parties then opened the

TABLE I. KILOMETERS OF BOUNDARY DELIMITED AND LABELED

Year	Awá	Cofán	Waorani	Chachi	Total
2003	0	50	50	0	100
2004	0	63	122	0	185
2005	0	85	0	0	85
2006/7	0	50	50	82	182
TOTAL	0	248	222	82	552

Source: CAIMAN monitoring database

boundary and placed signs at regular intervals.

Table 1 presents the boundaries delimited and labeled during CAIMAN. FEINCE supported the Cofán in delimiting the longest boundary, 248 km.

The number of kilometers delimited, however, is only part of the story. CAIMAN's work helped resolve serious conflicts between nationalities and colonists. In 2005, for example, CAIMAN helped 3 Chachi communities and 22 colonists in the Mache-Chindul Ecological Reserve end a conflict that threatened the very existence of the reserve. All parties agreed on a definitive boundary and delimited and labeled 82 kilometers.

One of CAIMAN's most significant achievements was creating a peaceful relationship between the Kichwa and Waorani, who for decades struggled with colonists and poachers drawn by the lack of clear boundaries. All of the stakeholders in this activity had the same primary concerns: secure territorial boundaries and control over

natural resources, and peaceful coexistence with neighbors.

CAIMAN and subcontractor Environmental Management and Rights Corporation (ECOLEX) used a multi-step approach to delimit the territory and resolve conflicts. Because the Waorani and Kichwa both claimed ancestral ownership of the boundaries in question, legally defined boundaries were used as a starting point for group discussions, including input from ONWAE. In many cases, the parties agreed on ancestral boundaries significantly different from those recognized by law. CAIMAN and ECOLEX also helped colonists secure land titles, thus empowering them to ward off further encroachment, stabilize the sensitive agricultural frontier, and seek otherwise-unavailable financing to invest in their properties.

The positive effects of the delimitation cannot be understated. All told, CAIMAN helped the Waorani delimit some 222 km of territory in one of the most remote regions of Ecuador. All parties now exert greater control over their natural resources, and



ECOLEX

The clearing and marking of the Waorani territorial boundary required resolutions to decades-old conflicts with neighboring Kichwa communities and colonists.

TABLE 2. HECTARES OF INDIGENOUS TERRITORY WITH STRENGTHENED LEGAL STATUS

Year	Awá	Cofán	Waorani (Tagaeri-Taromenane)	Kichwa (Yasuni National Park)	Total
2003	0	0	0	0	0
2004	99,427	7,500	0	0	106,927
2005	0	22,538	0	99,000	121,538
2006/7	0	0	780,000	0	780,000
TOTAL	99,427	30,038	780,000	99,000	1,008,465

Source: CAIMAN monitoring database

both colonists and indigenous peoples now agree on the location and size of their properties. Most importantly, there has been a noticeable decrease in tensions over boundaries. According to ECOLEX's Pedro Rosero, after the conclusion of a boundary agreement between two Kichwa and Waorani communities, both sides broke down and cried at having finally put a painful, sometimes violent conflict behind them.

LEGALIZING ANCESTRAL RIGHTS

Where ancestral rights were not legally recognized or the legal instruments recognizing those rights were weak, CAIMAN worked with indigenous federations to obtain land titles or create comanagement agreements with the MAE. CAIMAN ultimately strengthened indigenous ancestral rights to more than a million hectares (Table 2).

Significantly, FCAE received the title to 99,427 hectares in the Chocó region. Before CAIMAN, Awá ancestral territorial rights were recognized through the Awá Ethnic and Forest Reserve, established under a 1978 decree by the now-defunct Ecuadoran Forestry and Natural Areas Institute. Given current pressures on the Awá territory,¹⁰ this ministerial decree no longer affords adequate protection. CAIMAN worked with FCAE to meet the titling requirements; a title was granted by the minister of environment in late 2005 and celebrated in an April 2006 ceremony with the minister, U.S. ambassador, USAID mission director, and Awá representatives.

CAIMAN facilitated comanagement agreements between indigenous communities and nationalities and the MAE, covering 129,038 hectares. These agreements legally recognize the presence of indigenous peoples in protected areas and stipu-

¹⁰ At the time of this writing, FCAE was challenging control of 17,000 hectares of Awá territory by land traffickers posing as an Afro-Ecuadoran association. Over the past five years, oil palm companies have taken nearly 40,000 hectares of the Chocó in the Awá buffer zone.

late rights and responsibilities over natural resources. Just over 30,000 of these comanaged hectares are in the Cofán territory (7,500 in the Cuyabeno Wildlife Production Reserve and 22,538 in the Cayambe-Coca Ecological Reserve). The remaining 99,000 hectares are in Yasuni National Park in the ancestral territory of six Kichwa communities. The comanagement agreement with the Kichwa required a management plan and the resolution of boundary conflicts.

The legalization of 780,000 hectares of Tagaeri-Taromenane territory is an accomplishment of international importance. Fifty years ago, the Tagaeri and Taromenane clans of the Waorani ethnic group relocated to the remotest parts of Waorani territory and Yasuni National Park. Unfortunately, foreign oil companies were later granted concessions in the area the clans chose to inhabit.

In 1999, then-President Jamil Mahuad created an “intangible zone” to protect the two clans. The 700,000-hectare zone was to remain untouched, with a strict preservation regime and no extractive activities. A government commission was set up to approve a technical study and boundary proposal for the area; the task, however, was delayed for several years for political reasons.

In 2004, at the bequest of the Ministry of Environment, CAIMAN joined with the Wildlife Conservation Society and oil company ENCANA to finish the study and

proposal. Negotiations over the northern boundary, which the team suggested should cross existing oil exploration blocks, were tabled during further political changes. Talks resumed under President Alfredo Palacio, who signed a decree establishing definitive boundaries for the intangible zone in January 2007. By clarifying the legal status and location of the intangible zone, the Tagaeri and Taromenane clans now have a legal basis to control extractive and other economic activities in the area.

DEFENDING LEGAL RIGHTS

Legal rights must be proactively defended. CAIMAN teamed with FSC to create the Cofán Forest Guard Program, which proved resoundingly successful. Well-trained and equipped indigenous guards, backed by legal rights, are effectively deterring illegal activities within Cofán territory and mitigating external pressures. Today, because of the program, 350,000 hectares of highly biodiverse Amazon rainforest are protected on a daily basis. The guard program is so effective that it inspired a similar program in Chachi territory. Between the two guard programs, CAIMAN and its partners have installed groundbreaking indigenous-led, sustainable forest guard programs that protect 380,000 hectares of some of the world’s most biodiverse ecosystems.

OVERALL TERRITORIAL CONTROL

To capture the overall project impact in increasing indigenous control of territory, CAIMAN de-

SUCCESS STORY

Indigenous Answer to Territorial Protection



ICCA (INSTITUTO DE CAPACITACION Y CONSERVACION AMBIENTAL)

Chachi guards learning GPS and compass navigation from Cofán guards, whose CAIMAN-supported park program proved enormously successful at repelling threats to indigenous territory.

The Cofán Forest Guard Program is the first effective patrol of natural areas in Ecuador's northern Amazon.

Over the past 40 years, Cofán territory has been harmed by illegal logging, petroleum and mineral extraction, and an influx of colonists seeking economic opportunities. Roads built for oil exploration and extraction open once-remote territory to hunting, fragmentation, and even invasion.

Although most Cofán territory lies within Ecuador's national system of protected areas, limited resources for conservation have left the area vulnerable. In response, CAIMAN and FSC teamed to create a system of territorial control and vigilance for the Cofán territory.

The centerpiece of this system is a force of 60 forest guards who received 4 weeks of intensive training on map reading, GPS and compass navigation, first aid, logistics, conflict resolution, biological monitoring, indigenous rights, and environmental law. An agreement with the Ministry of Environment grants the guards the same rights as those it employs.

In their regular patrol of 350,000 hectares, the Cofán guards have accomplished several remarkable feats. According to Luis Narvaez, president of FEINCE, "the forest guard program has provided a solution to controlling our borders, created employment, and increased wildlife protection." The guards have reported or stopped illicit activities such as coca farming, dynamite fishing, and illegal settlements and mining. They also helped delimit 248 kilometers of vulnerable territorial boundaries.

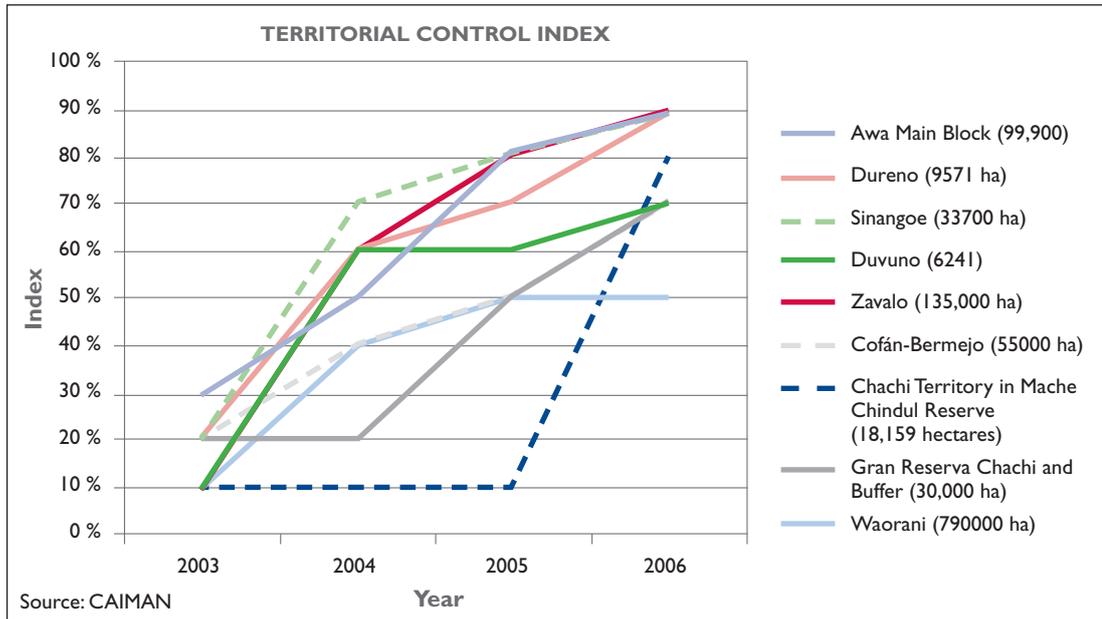
The program has become an important source of income. According to Randall Borman, FSC director, "almost every Cofán family has at least one family member working as a forest guard." In a way, the Cofán guard program internalizes the benefits that the Cofán territory provides to the rest of the world: biodiversity conservation, climate mitigation, and hydrological services.

The Cofán forest guard program had several unforeseen positive effects. One was the Institute for Environmental Capacity Building and Conservation, created by the FSC. The institute builds indigenous capacity for conservation training. Under subcontract to CAIMAN, the institute trained eight Chachi forest guards using Cofán guards as field instructors. The Chachi force now protects 30,000 hectares of territory in the highly biodiverse Chocó ecosystem.

Another unexpected impact was a feeling of increased unity among the Cofán. Cofán communities are far from each other, so they have had difficulty creating a unified nationality. Because the Cofán guards are from different territories, there is a more unified sense of purpose now.

With the right tools, resources, and training, indigenous groups have the capacity to control and monitor their own territories, thus help protecting Ecuador's natural treasures

FIGURE 3. CHANGES IN CAIMAN'S TERRITORIAL CONTROL INDEX



veloped a territorial control index.¹¹ Figure 3 illustrates changes in the index over the life of the project.¹²

The graphic shows a clear trend of increasing indigenous

control over their territory. These gains can largely be attributed to clearer and stronger legal rights, clearly demarcated boundaries, and regular patrol of territory.

¹¹ The territorial control index is composed of: 1) resource- or land-use rights or title secured, 2) demarcation of vulnerable boundary segments, 3) systematic vigilance or control at entry points, 4) participatory resource or territorial management plan approved, 5) conflicts mitigated or mitigation mechanisms in place, 6) threats to territorial integrity known, 7) legal boundaries and ground-level boundaries reconciled, 8) neighboring communities and colonists with secure land tenure, 9) strategy for external threats adopted by indigenous organizations or communities, and 10) community-level program to inform indigenous peoples of their legal rights.

¹² The Tagaeri-Taromenane intangible zone is excluded, as CAIMAN only worked to consolidate its legal status.



CAIMAN / WALTER PALACIOS

Outside influences are increasingly replacing traditional shamanism, like that practiced by this Cofán shaman. CAIMAN's work to strengthen indigenous groups can preserve their culture for generations to come.

CHAPTER THREE

CAPACITY FOR CONSERVATION: STRENGTHENING INSTITUTIONS AND INDIVIDUAL CAPABILITIES

INCREASING INDIVIDUAL CAPACITY

CAIMAN provided 314 training events (Annex C) for 3,623 men and 2,081 women.¹³ Events included one-day workshops and multi-module courses over several days, and local partners delivered most of the sessions. Figure 4 shows the number of training events in each of five broad categories. Pact delivered the bulk of the institutional strengthening training because CAIMAN saw strong institutions as essential to the conservation of indigenous territories. Technical training covered environmental impact assessments, forest management, fisheries, and natural resources management planning; these were conducted primarily

by the Jatun Sacha and Altrópico foundations. Capacity-building on laws, rights, and policies was conducted almost exclusively by ECOLEX and included a comprehensive paralegal training program and workshops on conflict resolution with territorial delimitation. The Sinchi Sacha Foundation was primarily in charge of handicraft training, including sessions on the elaboration, improvement, and commercialization of handicrafts.

Figure 5 displays the cost of training by topic. CAIMAN spent \$495,992 on training,¹⁴ with costs roughly proportional to the number of events held per topic. Figure 6 disaggregates training by gender. The relatively

¹³ Individuals may have participated in more than one event.

¹⁴ This figure is restricted to the cost of participant transportation and accommodation, materials, venue, etc. In most cases it does not include the cost of trainers, who were covered under separate line items in subcontracts and grant agreements.

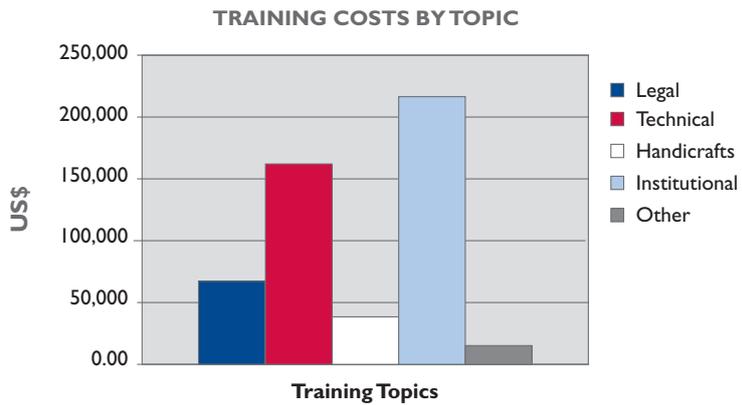
FIGURE 4. NUMBER OF TRAINING EVENTS IN FIVE BROAD CATEGORIES



“Legal” includes conflict mitigation, “technical” includes training on environmental impact assessment and natural resources management in general, “institutional” includes a broad range of institutional strengthening capacity-building activities, from strategic planning to participatory methods.

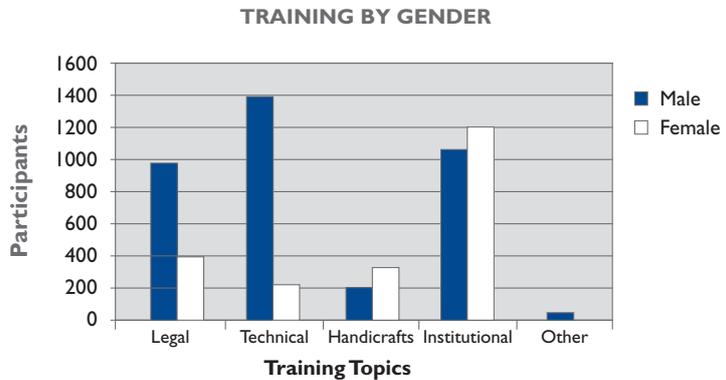
Source: CAIMAN

FIGURE 5. COST OF TRAINING BY TOPIC OVER THE LIFE OF THE PROJECT



Source: CAIMAN

FIGURE 6. GENDER AND TRAINING BY TOPIC



Source: CAIMAN

SUCCESS STORY

One Step Closer to Territorial Representation and Management



FEINCE was on the verge of collapse when CAIMAN first contacted it in 2002. Four years later, the federation has become a capable representative of the Cofán nationality. It is also able to provide technical assistance to Cofán families. Its program to improve poultry production proved highly successful.

FEINCE, the indigenous federation governing Cofán territory, recovered from near collapse to raise more than \$543,600 in project funds.

When CAIMAN began in 2003, FEINCE existed in name only. It was on the verge of being evicted from its office and had little technical and administrative capacity; in fact, it didn't even have a phone. Worse, it had lost its credibility with the Cofán and many organizations. The situation was bleak. As the only option for providing the Cofán with a unified voice to help protect and develop their 350,000-hectare territory, the failure of FEINCE would likely result in continued environmental and cultural deterioration.

CAIMAN knew that with the necessary administrative and technical tools and a successful track record in planning, managing, and evaluating projects, FEINCE could become an effective, sustainable institution. Thus, CAIMAN utilized a dual approach of providing technical assistance through planning and administrative capacity-building subcontracts to PACT and Manos Solidarias, and granting institutional-strengthening funds directly to FEINCE.

To measure capacity, CAIMAN developed an institutional strengthening index of 12 indices, including adequate office space, accounting systems, and a strategic plan. At the beginning of the project, FEINCE scored a 0 because it lacked all critical institutional elements.

CAIMAN's grants provided development assistance and strengthened the institution. The funding allowed FEINCE to take over and expand on activities previously undertaken by NGOs — such as the extension of poultry husbandry in several Cofán communities — and facilitate a development plan for the community of Dureno. In addition, CAIMAN helped FEINCE to develop its accounting and financial management systems and provided training in labor and tax laws and procedures and computer literacy. FEINCE successfully used these tools to secure funding from the Basque Country, Child Development Fund, First Nations, and the Ministry of Social Well-Being.

After four years, FEINCE achieved an 83 percent on the institutional strengthening index. The organization now links community bamboo and handicraft producers and solves territorial disputes through the Cofán guard program. FEINCE has even won two project proposals. According to FEINCE President Luis Narvaez, "Most people didn't even know what a project was before CAIMAN."

FEINCE has persevered through tough times to become a trusted partner of the Cofán. After smoothly navigating two changes in leadership, FEINCE is now an institution that can protect and develop Cofán territory.

low participation of women in legal and technical training is not entirely surprising, given the low level of formal education of indigenous women and their secondary role in decision-making. The paralegal program required a minimum level of formal education, thus excluding most women from consideration.

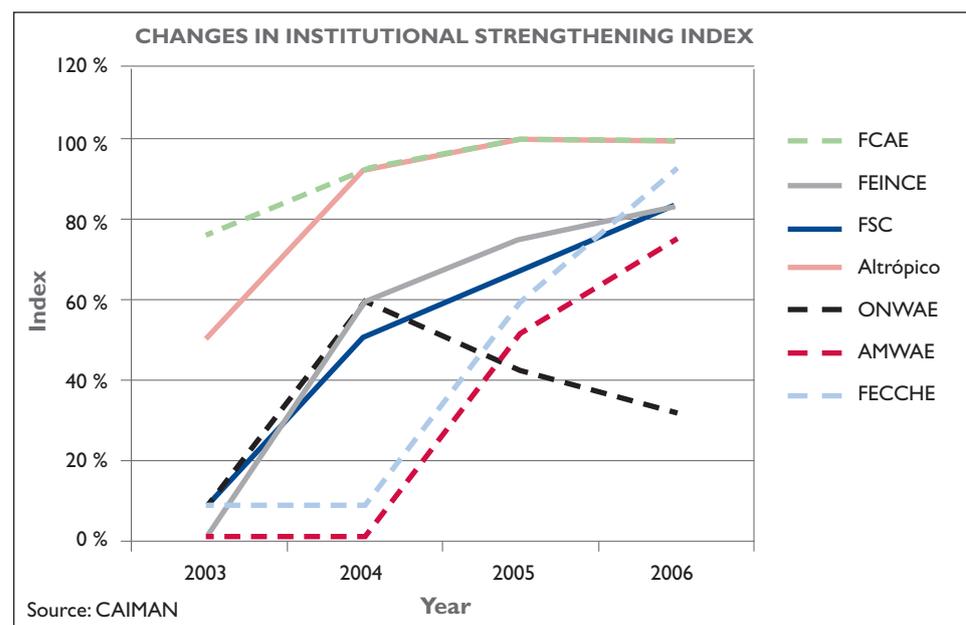
The relatively high participation of women in handicraft training is also expected given that handicrafts are made primarily by women, though it should be noted that with the Awá and Chachi, both men and women are artisans, specializing in different handicrafts. Overall, relatively few people participated in handicraft training because this work began in 2004. However, these events tended to last longer than those on other topics.

Worth noting is the relatively high number of women trained in institutional strengthening. This can largely be attributed to intensive work with the Association of Waorani Women of the Ecuadoran Amazon (AMWAE). Interest in these events was impressive and bodes well for the future of the association.

STRENGTHENING INDIGENOUS INSTITUTIONS

The centerpiece of CAIMAN's approach to strengthening indigenous organizations was cost-reimbursement grant agreements made directly to the organizations. Under the agreements, CAIMAN linked reimbursement with thoroughly documented justifications of expenditures and strict adherence to accounting and financial management pro-

FIGURE 7. CHANGES IN THE INSTITUTIONAL STRENGTHENING INDEX



cedures. CAIMAN also insisted that the organizations follow labor and tax laws. Because disbursement was contingent on good accounting and financial management, the indigenous organizations had an immediate incentive to follow procedures and seek assistance when the procedures were beyond their capacity. CAIMAN's primary beneficiaries under this program were FECCHE, AMWAE, FEINCE, and FCAE.

CAIMAN used a number of approaches to help the organizations meet the strict requirements, including continuous support and supervision by CAIMAN's grant manager and the provision of equipment, software, and training on computers and software, labor and tax laws, and accounting procedures. Finally, CAIMAN worked with FEINCE, AMWAE, FECCHE, and FCAE to develop administrative and financial management manuals. In addition to this assistance with day-to-day operations, CAIMAN helped develop strategic, financial, and communications plans.

To measure its impact, CAIMAN developed an institutional strengthening index with 12 parameters.¹⁵ Information provided by the indigenous organizations was used to rate them on the index and produce a percentage of parameters achieved. Figure 7 presents changes in the index over

the life of the project. With the exception of ONWAE,¹⁶ all the organizations showed significant improvements.

CAIMAN helped launch AMWAE, which was officially recognized by the National Women's Council in 2004. The organization is believed to be the first nationality-wide indigenous women's organization in the Amazon region. Shortly after launch, the group established a strategic plan, an office, and accounting systems. AMWAE now manages a small handicraft store and keeps a strong presence in the community. The group recently made a smooth political transition to new leadership while retaining the technical employees who helped establish the association. AMWAE has secured funding from other sources and adopted an administrative and financial management manual to enhance its credibility. The emergence of AMWAE is perhaps one of CAIMAN's most important institutional-strengthening accomplishments.

In addition to the federations and AMWAE, CAIMAN worked to strengthen organizations with long relationships with individual indigenous groups — Altrópico and the Awá, VIHOMA and the Secoya, and FSC and the Cofán. Unlike international NGOs, which often work with indigenous groups on defined projects, these

¹⁵ The parameters were: 1) adequate office space, 2) clearly defined administrative structures, 3) accounting systems in place, 4) procurement policy and procedures, 5) travel policies and procedures, 6) personnel with access to adequate equipment, 7) adequate communications systems, 8) fixed assets inventory, 9) personnel trained according to position, 10) strategic plan, 11) annual work plans, and 12) financial plan.

¹⁶ ONWAE suffered an organizational setback in 2004; subsequently, CAIMAN temporarily suspended its grant agreement with ONWAE.

Members of the Waorani women's association at a rally in Quito. CAIMAN played a crucial role in developing the group, which is active in protecting Waorani territory from oil exploration.

CAIMAN / MARIBEL DE LA TORRE



organizations' sole purpose is to maintain long-term relationships with indigenous groups. Strengthening these groups, then, directly benefits their indigenous partners.

Under a subcontract to CAIMAN, Pact helped Altrópico develop stra-

tegic and financial plans and improve its organizational structure. Furthermore, cost-reimbursement grants helped Altrópico improve its financial management and reporting capacity. These improvements are reflected in the positive changes in Altrópico's institutional strength index.

FINANCIAL SUSTAINABILITY: PAYING FOR CONSERVATION AND MAKING CONSERVATION PAY

Funding is the Achilles tendon of conservation initiatives. To address this issue, CAIMAN adopted a three-pronged strategy: 1) help people engage in income-generating activities compatible with conservation, 2) team with conservation NGOs to establish financing mechanisms, and 3) recognizing that most indigenous communities are uncoupled from the market, improve subsistence agriculture.

INCOME GENERATION

CAIMAN commissioned feasibility studies on ecotourism, sustainable logging, and non-timber forest products to identify

income-generating opportunities within the indigenous territories.

Ecotourism

CAIMAN's ecotourism feasibility study covered the Waorani and Awá territories.¹⁷ Sites that satisfied security, social, and logistical/accessibility considerations underwent a preliminary financial feasibility analysis.

Three potential sites emerged: two Awá and one Waorani. In the Awá territory, a canopy walk and bird-watching itinerary were considered feasible with some basic infrastructure, though the canopy idea was later abandoned due to

¹⁷ The Cofán territory was not included in the study because of security threats due to its proximity to Colombia, which would have limited the ability to finance ecotourism and other activities in the area.

land tenure issues. Considerable progress was made with the bird-watching activity — a business plan was developed, an agreement signed with the community, an architectural concept developed, and tour operators contacted. Unfortunately, this activity was determined to be too close to the Colombian border, so CAIMAN ended it. The documentation and studies, however, were shared with an international NGO interested in pursuing the activity.¹⁸

In Waorani territory, CAIMAN focused on the community of Quehueriono, where a tour operator, Tropic Journeys in Nature, has operated for 10 years. Tourist flow has been highly irregular because of a lack of basic facilities, no marketing strategy, and a poorly organized community. The feasibility analysis showed that ecotourism was financially feasible if a donor organization assumed some of the risks of working in this remote area.

CAIMAN teamed with Tropic to create a financially feasible and culturally and environmentally sensitive activity. A protracted participatory process with the community determined their hopes and concerns and sought their input on the design of ecotourism products. The group developed a code of conduct for tourists and the community, a map of potential ecotourism attractions, and zoning for community areas.

An indigenous thatched-roof tent was built to house up to

10 tourists. Simple yet effective water and sewage systems were set up, and a small restaurant, kitchen, and workers' lodging were also added to the compound. Local labor and materials, including 12 trees, were used during construction.

During construction, CAIMAN trained the Waorani on ecotourism. Topics included warehouse inventory, housekeeping, hygiene, food preparation, and tourist relations. CAIMAN also developed a business agreement between Tropic and the community and organized a community association, which now owns the infrastructure that Tropic manages. The Quehueriono association is now the only indigenous community-based organization in Waorani territory.

To make sure the ecotourism activities continue into the future, CAIMAN developed an operations manual and the framework to implement an environmental management system. Lodging fees will be deposited in accounts for lodge maintenance and community investments. The local population now benefits from direct employment and the sale of food and handicrafts. CAIMAN's work helped create the conditions for increased tourism in the area, which will further solidify Tropic and Quehueriono's successful joint venture.

The Secoya also created a sustainable ecotourism activity with CAIMAN's assistance (see "Grants Program Exceeds Expec-

¹⁸ At the time of this writing, the NGO had not yet pursued the bird-watching activity.



TROPIC JOURNEYS IN NATURE / LAURENT ATILIA

CAIMAN helped develop an ecotourism activity in Quehueriono with full community participation. At left, a waterfall that draws visitors to the area. Below, Waorani girls work on a map identifying potential tourist attractions, creating a vision of how they want their community to look.

CAIMAN / ARNALDO RODRIGUEZ



SUCCESS STORY

Renaissance of Ancestral Skills



SINCHI SACHA FOUNDATION

Samples of the line of Awá masks that have been so successful. The Awá adapted their wood-carving skills to masks with the assistance of the Sinchi Sacha Foundation. Masks and other handicrafts have become an important source of income for Awá families.

Felix Nastacuaz, like many other Awá, had little incentive to practice ancestral woodworking. This young artisan was one of the few remaining Awá who knew how to make the simple wooden trays and bowls they use each day. With many demands on his time, Felix could not justify spending much time making household items when he could easily purchase them.

Felix's predicament is seen throughout indigenous territories in South America. The practical items traditionally made by indigenous peoples are now being replaced by mass-produced goods. Woven handbags are being replaced by plastic bags, blowguns by shotguns, and ceramic pots by aluminum cookware.

Preserving ancestral artisanal skills can enhance their economic value, so CAIMAN teamed with the Sinchi Sacha Foundation to promote indigenous handicrafts as an important source of income.

Felix and other Awá joined a group of indigenous artisans for three months of capacity-building activities. They toured handicraft stores and had short internships in workshops in Quito and other cities. Sinchi Sacha trained Felix and the other students on advanced carving techniques, tools, finishing, and quality control. The foundation also looked at Awá mythology to suggest designs that could be incorporated into their work, thereby conserving cultural knowledge and increasing the handicrafts' value.

As Felix tells it, "To tell you the truth, at the beginning I was just testing. But I found out that [the masks] sold very well and I decided to learn more. Before the project we used to sell timber. But now we prefer to sell handicrafts because we found that it is economically better. We used to earn between \$25 and \$30 per month from timber sales. In a good month we could earn \$50. Now with the masks I earn \$100 per month, sometimes \$150."

Felix makes up to 20 masks per month and sells them for \$10 to \$30. In Quito, some of his masks sell for \$60. Twenty-five other families have joined the initiative, which Felix now coordinates. Besides the substantial financial benefits to the Awá, CAIMAN has helped them to preserve their ancestral skills and mythology as well as their environment.

Cabin in a Quehueriono tented camp. The camp was built with minimal environmental disturbance. The aim was to integrate such structures with the forest and replicate traditional Waorani architecture. Ecotourism is one of the few economic options available to indigenous people that is compatible with conservation.

CAIMAN / JOAO S. DE QUEIROZ



tation, page 14). Its infrastructure is minimal and the project is overseen by a partnership between the Secoya and VIHOMA.

Handicrafts

The feasibility study identified handicrafts as a non-timber forest product that could be improved in CAIMAN's short timeframe. Because handicrafts are nearly ubiquitous in the territories, there is an existing market for them in Ecuador's cities and a strong interest, particularly by indigenous women, in selling them. These crafts, however, are threatened by cheap, mass-produced goods. Without an intervention, the indigenous skills to make traditional items could disappear in a matter of decades.

CAIMAN partnered with the Sinchi Sacha Foundation,¹⁹ which has an established market-

ing network in Quito, to inventory product lines for the Awá, Waorani, and Cofán.²⁰ The project found six bottlenecks to commercialization: 1) inconsistent quality, 2) limited product lines, 3) indigenous artisans' lack of market knowledge, 4) inconsistent supply, 5) no direct linkage between artisans and markets, and 6) lack of organization.

The inventory also revealed distinctions between the groups. The Awá produced only traditional handbags called *shigras*. The Waorani and Cofán had a more lively handicraft culture, producing hammocks, *shigras* made from chambira palm, and seed and chambira necklaces and bracelets. The Waorani also sell blowguns, lances, and wooden machetes, while the Cofán make wooden oars. Of the three groups, the Cofán had higher-

¹⁹ CAIMAN contracted with the Sinchi Sacha Foundation through a public bidding process.

²⁰ Later, at the request of FECCHE, CAIMAN expanded its handicraft work to Chachi artisans.

CAIMAN and its organizational partners provided training in handicrafts to increase indigenous people's limited options for generating income. Here, a Waorani prepares chambira fiber to weave a hammock.

TROPIC JOURNALS IN NATURE / LAURENT ATTILA



quality products and better market linkages.

Sinchi Sacha tested 87 products for marketability at its store in Quito; from this, 30 were chosen for assistance. More than 200 artisans were trained on improving the design and commercial appeal of many items by integrating cultural elements and making adjustments to make the products more practical and aesthetically attractive. Appropriate technology (such as hand-held drills) was introduced, and artisans went to handicraft fairs in Quito and Guayaquil to sell their wares and learn how to deal with buyers firsthand.

Eight “master artisans,” selected for their leadership and artistic skills, served as primary contacts between Sinchi Sacha and the artisan community. Though

there was little support for an indigenous artisans’ association, CAIMAN certified 59 artisans under the Ministry of International Commerce’s National Handcraft Directorate. This grants artisans tax-exempt status and training opportunities.

With indigenous territories covering vast, remote regions of the country, transaction costs posed an obstacle to market participation, as did the tradition of working only when income was needed. The artisans needed a system to amass handicrafts for regular sales to Sinchi Sacha.

For the Cofán and Waorani, CAIMAN set up stores in Lago Agrio and Puyo, run by FEINCE and AMWAE, respectively.²¹ These stores buy directly from artisans and sell to Sinchi Sacha and local clients. In return, the

²¹ Spanish oil company REPSOL supports the Waorani store via AMWAE.

“ I have made handicrafts since I was very small. Before the project we used the products ourselves. My grandmother showed me how to weave when I was around 10 or 12 years old ... I had never before sold my handicrafts. Now for each order I receive around \$30. This has been a great help to the family. I manage the money from the handicrafts. This money I do not hand over to my husband. I always use the money to buy medicine, material for the house, clothes, and some food items. ”

**YOCONDA AÑAPA
CAMBOLERO, FEMALE
CHACHI ARTISAN, AGE 28
WITH TWO DAUGHTERS.**

TABLE 3. HANDICRAFT SALES BY INDIGENOUS ARTISANS AND STORES TO SINCHI SACHA IN 2006

Nationality	Sales to Sinchi Sacha (\$)	Percentage of total
Cofán	7,617	35.32
Awá	6,217	28.83
Chachi	5,329	24.71
Woorani	2,405	11.15
TOTAL	21,569	100.00

Source: CAIMAN

stores work with the artisans to address concerns about pricing and quality control. Both stores are on their way to sustainability.

For the Awá and Chachi, two master artisans relay orders to other artisans, store and deliver the products, and receive payments. The process has so far run smoothly.

Table 3 summarizes Sinchi Sacha’s handicraft purchases in 2006. The group purchased \$21,569 of handicrafts; of this, Cofán handicrafts comprised just over a third, or \$7,617. These figures do not include store sales.

To ensure that its work will continue, CAIMAN hired a handicraft marketing specialist to help Sinchi Sacha develop a commercial link to 17 U.S.-based stores selling indigenous handicrafts. Of these, three have placed orders and others have expressed interest in purchasing goods when they next restock.

These relationships are critical to indigenous peoples with limited income-generating opportunities and increasing cash needs, as illustrated by the testimony at left.²²

Giant Bamboo

While looking for sites for sustainable forestry, CAIMAN’s partner, the Jatun Sacha Foundation, found a 1,500-hectare patch of giant bamboo in the Cofán community of Duvuno. The local residents had little idea of its economic potential. Based on a field trip to areas with a well-developed bamboo industry, the community decided to pursue the initiative, which eventually yielded a fledgling bamboo plan that shows promise if not big results.

CAIMAN’s initial study indicated a large market for split bamboo in the Guayas province, where an NGO builds low-income housing. The market price was \$1.00 per six-meter stem

²² Final project report submitted to CAIMAN/USAID from Sinchi Sacha. Annex, “Life histories told by the protagonists.”

Men load giant bamboo for transport to Lago Agrio. CAIMAN supported the creation of a fledgling bamboo industry in the Cofán territory.

JATUN SACHA FOUNDATION / NUBIA JARAMILLO



of split bamboo. CAIMAN and Jatun Sacha created a business plan with estimated productivity rates and production, transport, and transaction costs. The result was that the activity was feasible, but only marginally so. Given the lack of income-generating alternatives and the potential for employment and improved organization, CAIMAN began work on the activity.

Bamboo producers in Duvuno formed an association where members would work in extraction, preliminary processing, and river transport, and the association would pay them with proceeds from the sales. Jatun Sacha agreed to cover labor costs while the association got started, recovering production costs in exchange.

Association members were trained in accounting, micro-enterprise, and bamboo management. A pilot crop under sustainable management showed impressive increases in productivity and quality.

It soon became clear, though, that initial estimates of bamboo's feasibility were inaccurate. Productivity estimates were too high by an order of magnitude — the Cofán could not split bamboo as fast as the coastal colonists cited in the estimates. Further, transporting bamboo to the river proved to be time-consuming, difficult, and expensive. Because the bamboo was of high quality, its thick walls were heavier than estimated. This, compounded by the fact that the stems accumulated moisture while awaiting shipment, limited the number of stems that could be transported in each truck. Finally, because of the Cofán's inexperience with bamboo, many of the split stems were rejected by the buyer in Guayas.

There were also problems in the community. Some association members did not fully contribute to the bamboo harvesting and transport, while others felt the enterprise belonged to CAIMAN or Jatun Sacha, not to them. And

many of the Cofán of Duvuno prefer to work individually, not in groups.

Because of these issues, the community suggested dissolving the association so that only those truly interested would participate. This model is similar to timber extraction, where individuals and families work independently.

To increase productivity, the project increased training on bamboo management and processing and installed a cable transport system, like those used in banana plantations, to facilitate the 1.2-kilometer transfer to the river. To protect harvested stems, covered storage areas were built next to the Aguarico River and at FEINCE's facilities in Lago Agrio. Additionally, a study sought closer markets. Most importantly, FEINCE became the coordinator and middleman, a key role in the enterprise.

One family took a leadership role, employing members of the community to extract bamboo as needed. A closer market was found in Cayambe, where flower producers use bamboo as wind-breaks to their greenhouses. The construction industry in Lago Agrio was also a market. By project end, 6 of 19 families in Duvuno were active participants in sustainable bamboo use.

In 2006, FEINCE sold 3,200 bamboo stems, most in Cayambe. Of gross sales of \$3,082, just over \$1,000 went directly to the participating families, nearly doubling their cash income. From their point of view, the

activity was a success. From a financial perspective, however, a few problems remain. FEINCE's returns were minimal — only \$169. This serves as a disincentive for the organization to continue its participation. To profit, sales must increase considerably.

However, increasing production beyond what is immediately needed to generate cash for the household is not in keeping with the way of life in Duvuno. The concepts of profit and wealth accumulation are not part of the local culture. The community thus cannot meet the demands of the Cayambe market, which needs bamboo on a regular basis, not only when Duvuno residents need income.

Though CAIMAN's efforts to launch a bamboo industry in Duvuno were only partially successful, some members of the community have realized increased incomes as a result. And two Cofán received extensive training in bamboo handicraft production, which is another potential market for bamboo production. FEINCE and Duvuno will need alternative business models, such as concessions, as well as increased productivity, to continue the fledgling bamboo industry.

Sustainable Forestry

CAIMAN and Jatun Sacha's analysis of sustainable forestry opportunities focused on the Awá, Cofán, and Waorani territory. High-tech GIS satellite imagery and low-tech on-the-ground examination yielded data on vegetation, topography, acces-

sibility, productivity, and social organization.

Within the Cofán territory, only Dureno and Duvuno could be considered as the rest of the territory is in protected areas barring commercial forestry. Unfortunately, the timber resources in these two communities have been overexploited, thus limiting their commercial potential.

Waorani territory showed considerable potential, and illegal logging there is a critical threat to biodiversity and the culture. To address this situation and derive income, CAIMAN and ONWAE started a training and organizational process that culminated in the sustainable management of certain sectors of the territory and a field school to train the Waorani in sustainable forestry. Unfortunately, ONWAE later experienced a difficult transition in leadership and CAIMAN had to pull out of the project. Helping the Waorani bring illegal timber under control remains an urgent need.

The Awá territory was well-suited for sustainable forestry because of previous USAID-funded work by WWF and the Altrópico Foundation. FCAE had trained forest extension agents on staff, and when CAIMAN arrived, the Awá were conducting sustainable timber extraction under management plans approved by the Ministry of Environment. CAIMAN simply plugged in to the existing system to help FCAE expand and improve its forestry activities. A direct grant to FCAE built its capacity, and in 2006, the group

logged 184.8 cubic meters of high-quality timber, selling the bulk for \$27,113.

Sustainable logging by indigenous nationalities faces a number of obstacles, the least of which is inaccessibility to timber sites. Because illegal harvesters do not properly manage forests, develop management plans, or secure permits, their products are cheaper. The lack of control over logging acts as a subsidy to illegal logging.

CAIMAN and FCAE reforested 39 hectares of abandoned Awá cropping area with balsa in 6 communities. These plantings will provide participating families with income in 4-5 years when the balsa reaches harvestable dimensions.

CONSERVATION FINANCE

The private sector

One of CAIMAN's aims was to set up conservation financing mechanisms. To identify possibilities, CAIMAN commissioned analyses on conservation financing in indigenous territories and corporate approaches to conservation finance. The former noted:

- The environmental finance options foreseen during project design (debt-financed endowments, carbon credits, voluntary agreements with oil companies, and biodiversity prospecting agreements) have largely failed to materialize, due in large part to political instability and failure to obtain operational agreement for a

national forest verification scheme. Limited regulatory capacity, inadequate fiscal incentives for charitable donations, and a lack of enabling policy for conservation easements have limited indigenous communities' options for packaging and selling their conservation services and products.

- International conservation organizations' investments in Ecuador have been substantial, but they rarely seek to develop sustainable funding mechanisms. Several major NGOs are investigating funding mechanisms and are keen to strengthen indigenous federations' bargaining power.
- Corporate investment in indigenous conservation has been largely absent, though funding to the Waorani could have been used for conservation had there been a transparent framework for setting priorities and distributing funds. The Amazonian Regional Ecodevelopment Institute and ECOFONDO²³ have no explicit commitments to indigenous groups; as such, few resources have reached indigenous reserves.

The second analysis included a survey of multinational and national companies operating in Ecuador. Interviews with representatives from nine leading companies indicated:

- Companies in Ecuador are becoming more socially and

environmentally responsible. Several have corporate responsibility departments or agendas, but none have an explicit interest in indigenous territories.

- Most companies focus their corporate responsibility on reducing their environmental footprint in their immediate area of influence.
- There is a broad range in corporate responsibility, with some companies virtually unaware of the concept and others actively consolidating their agendas. Interestingly, some Ecuadoran companies, such as PRONACA, have taken a leadership role in corporate responsibility.
- The concepts of biodiversity offsets and payments for environmental services are not well understood by indigenous groups and corporations in Ecuador. There is also considerable suspicion about the intentions of multinational corporations in indigenous territories. Hence, capitalizing on these possibilities is a long-term process where understanding and trust will be built once an investor is found.

While there is great potential to secure private resources for conservation, there are several obstacles to it — notably, a lack of understanding of conservation financing options among indigenous peoples and companies, an unclear link between conserva-

²³ As part of the Ecuadoran government, the institute funds development activities in the Amazon region. Its resources come from a fee levied on each barrel of oil. ECOFONDO is a draw-down fund created by the oil pipeline in association with the MAE and conservation NGOs. It funds activities in the pipeline's area of influence.

The oil industry has profound impacts on indigenous territories. Roads and rights of way increase access and pressures on sensitive areas. CAIMAN helped identify government resources to mitigate these impacts, but there remains a lack of clarity as to how to best access this assistance.

CAIMAN / JOAO S. DE QUEIROZ



tion finance and profitability, and corporations' sometimes limited view of corporate responsibility. Overcoming these obstacles will require time and investment.

Government funds

Ecuador has a considerable pool of government funding for the environment, derived mostly from oil royalties. Five percent of a new account, CEREPS (Cuenta Especial de Reactivación Productiva y Social del Desarrollo Científico-Tecnológico y Estabilización Fiscal), is administered by the Ministry of Environment to remediate damages produced by the oil industry.

In 2006, CEREPS allotted \$37 million to mitigate the environmental and socioeconomic impacts of oil exploration, extraction, and transport. Of this, \$7 million was earmarked for the indigenous nationalities directly impacted by the oil industry, including the Cofán, Waorani, Secoya, Siona, and some Kichwa communities.

CAIMAN saw CEREPS as a golden opportunity to perpetually fund some of its initiatives. Efforts to secure government

funding led to a series of setbacks but provided important lessons in how to move forward.

In partnership with the Nature Conservancy, ECOLEX, FSC, and FEINCE, and with support from USAID, CAIMAN proposed that the MAE create a \$1 million fiduciary fund to help finance the Cofán forest guards program in perpetuity. By working with a representative of the MAE from the outset, the team felt that such a fund would be favored by the ministry. The team then created a proposal that included financing for operational costs, replacement equipment, and a separate account under the National Environmental Fund

Upon receiving the proposal, the MAE consulted with the Ministry of Economy and Finance, which must approve funding for technical proposals selected and submitted by the MAE. It was at this point that the team learned funds created with government money cannot finance recurring costs. A second proposal thus covered only equipment, vehicles, other one-time expenses, and the construction of guard stations.

The MAE again vetted the proposal with the Ministry of Economy and Finance and again rejected it, saying this time that government funds could not be used to set up any sort of fiduciary fund. Proposals would instead have to cover specific projects only. By this time, the proposal process had closed so the team abandoned its efforts.

The experience shows the limitations of using government funding for conservation financing in general and indigenous conservation activities in specific. First, the process for submitting proposals for CEREPS funding is unclear; instructions are often verbal and subject to varying interpretations. Second, there are no clear criteria for determining which proposals will be funded. Third, there is no guidance as to what kinds of activities or mechanisms CEREPS can fund. The news that government funding cannot be used to create fiduciary funds was somewhat surprising as there are several such funds that were set up with government funding. Finally, MAE has limited experience in administering grant programs.

In sum, there is a considerable pool of government funds available for conservation of indigenous territories. Procedural and institutional weaknesses limit the effective use of these funds, and there is no clear avenue to accessing CEREPS funding. There remains, however, a clear opportunity to significantly increase conservation and development funding in indigenous territories by addressing these weaknesses.

Financing conservation in Chachi territory

In 2004, CAIMAN was invited to work with Conservation International and GTZ²⁴ on a conservation finance mechanism for the 7,200-hectare La Gran Reserva Chachi, situated in 30,000 hectares of Chachi territory in the lower Chocó. The two organizations had already worked with the Chachi to lay the groundwork for the reserve, defining its location and boundaries.

Because timber extraction has taken a heavy toll on the area, Conservation International calculated the opportunity cost of not selling timber at \$5 per hectare.²⁵ GTZ agreed to pay this fee if the communities monitored the reserve and managed their fees appropriately. All revenues are to be used for community development, and investments have so far included potable water supplies, housing, and education.

A long-term funding mechanism was still necessary, so CAIMAN awarded Conservation International a grant to design a \$2 million fiduciary fund. This fund is managed by representatives of the communities, the Chachi federation, MAE, the donors, and environmental experts. The project sought \$1 million in funding from the Global Environment Facility and matching funds from the Global Conservation Fund.²⁶ Additionally, Conservation International obtained \$150,000 in seed money from the British rock band Coldplay.

24 GTZ works with Chachi through the Ecuadoran Service for Conservation and Sustainable Development Foundation, a small, local organization.

25 Opportunity cost is the average annual income per hectare of timber sales that the communities would forsake by placing the area under a conservation regime.

26 As of this writing, the proposal had made the first cut and was likely to be funded.

SMALL-SCALE SUBSISTENCE AGRICULTURE

Until a market or compensation system rewards the environmental services they provide to the world, and as long as they are logistically and culturally uncoupled from the market, indigenous peoples will rely on subsistence agriculture for most of their income.

Even though subsistence production was not an explicit element of CAIMAN's results framework, USAID recognized that supporting such agriculture is part of its portfolio. Because subsistence crops partially displace the need for cash, it is discussed here as a route to financial sustainability.

CAIMAN focused its subsistence agriculture work on the Awá and selected Cofán communities, especially those facing or likely to face nutritional deficiencies. In the Awá territory,²⁷ CAIMAN focused on fisheries, poultry, and wild bee honey.²⁸

Because the Chocó ecosystem is unique and there is scant knowledge about the ecology and husbandry of native fish and bee species, an intensive on-farm applied research program was necessary before disseminating technologies to manage those species. This research

will benefit not only the Awá, but also neighboring Afro-Ecuadoran communities²⁹ and colonists in the territory's buffer zone.³⁰

Research on the mojarra fish showed an average weight increase of 300 grams over 8 months, a rate lower than that of commercial species like tilapia and cachama, but it is well within the range of commercial viability. With the wymal bee, research looked at beehive design and bee handling techniques to reduce the interharvest period from six to four months and annual production from two to four liters per hive. This honey fetches \$10 per liter in San Lorenzo, where there is a brisk market.

With CAIMAN's support, Altrópico and FCAE installed 73 fish ponds (Table 4) at households across the territory.³¹ In addition, 15 Afro-Ecuadoran families in the territory's buffer zone have also begun to raise the fish. Because of CAIMAN, 88 families in the Chocó now have fish ponds, 63 of which are stocked with native species. All of these families were trained on the management of fish ponds and native species.

Ninety-one wild beehives are now in production in the Chocó, 50 of which belong to 10 Awá families in 4 communities. The other 41

27 Work in Awá territory is extremely difficult as all inputs must be transported on foot along long, steep, muddy trails.

28 Wild bee honey is often used as a cash crop. The honey is also believed to have medicinal properties.

29 CAIMAN and Altrópico also worked with Afro-Ecuadoran communities in the buffer zone to open communication channels and counter the notion that only the Awá receive assistance.

30 Five hundred copies of the manual on mojarra and 700 on wymal bee production were produced for the Awá and neighboring communities in the Chocó.

31 Twenty-five Awá families have fish ponds with tilapia and carp, which was introduced to the territory at least a decade ago. CAIMAN's work may stem the spread of these nonnative species by encouraging the breeding of native species.

are located in Afro-Ecuadoran communities. Altrópico forecasts total honey production at 360 to 450 liters in 2007.

The figures for fish ponds and beehives may seem modest, but this was a new activity in the area. Their future potential is great as there is much demand for fishery and beehive technologies. Altrópico intends to continue these efforts.

Besides fish and beehives, FCAE's extension agents worked with 34 families to improve their food self-sufficiency. Their efforts included poultry production, improved cultivation practices, and intensive sheep husbandry.

In Cofán territory, CAIMAN worked primarily in Dureno,

Duvuno, and Sinangoe (Table 5). Dureno and Duvuno are the densest settlements in the territory.³²

Although designed to supply household needs, some of the gardens produced a surplus, which was sold locally. The impact of the 24 new agroforestry plots could not be determined by the end of the project.

The most successful intervention in Cofán territory was the introduction of improved poultry husbandry. This consisted of building corrals and egg-laying sites and planting adapted forage species. In all, 50 Cofán families adopted improved practices through FEINCE's efforts, whose work elevated the federation's image within the community.

TABLE 4. FISHERY, WILD BEE HUSBANDRY, AND OTHER ACTIVITIES IN THE AWÁ TERRITORY

Activity	Awá Territory	Buffer Zone	Total
Fish ponds	73	15	88
Wild beehives	50	41	91
Other	34	0	34

Source: Data compiled by CAIMAN from reports submitted by subcontractors and grantees.

TABLE 5. SMALL-SCALE AGRICULTURAL ACTIVITIES IN THE COFÁN TERRITORY

Activity	Dureno	Duvuno	Sinangoe	Total
Home gardens	9	2	3	14
Agroforestry	11	3	10	24
Poultry	22	15	13	50

Source: Data compiled by CAIMAN from reports submitted by subcontractors and grantees.

32 As mentioned earlier, the Cofán have five territorial units, three of which are in protected areas. They have communal titles for Dureno and Duvuno.

Capturing bees in the Awá territory. The wymal bee produces a honey used locally for medicinal purposes. CAIMAN helped bee keepers increase production.

CAIMAN / OSCAR MEJIA



The Awá raise mojarra for subsistence and sale. Original applied research supported by CAIMAN led to the development of procedures to raise this species in captivity using local materials. Besides serving as a native alternative to introduced species, the mojarra is quite tasty.

CAIMAN / OSCAR MEJIA

A Waorani in the Shiripuno River displays his catch. Hunting and gathering remains an important food source, supplemented by subsistence agriculture supported by CAIMAN.

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CHAPTER FIVE

ANCILLARY ACCOMPLISHMENTS AND SPIN-OFFS

Many of CAIMAN's accomplishments are cross-cutting and do not fit neatly into any one category. These include:

- Management plans ranging from family-level, simplified forest use plans in the Awá territory (13 plans covering 744 hectares) to territorial management plans. Among the latter, the most important were a plan for 6 Kichwa communities in Yasuni National Park, which covers 99,000 hectares, and development plans for the Cofán communities of Dureno (9,571 hectares) and Duvuno (6,241 hectares).
- Teaming with Petrobrás, Pact, ONWAE, and AMWAE to create the Plan de Vida de la Nacionalidad Waorani. This entailed training 21 Waorani on participatory methods, consulting 1,600 Waorani in their communities, synthesizing 900 pages of raw information, and drafting a plan. Though CAIMAN ran out of time to vet the plan, Petrobrás and ONWAE are following through with it.
- Stabilizing the western boundary of the Awá territory by supporting a coalition of NGOs and local governments to consolidate the boundaries and legal status of the 13,000-hectare Golondrinas Forest. The process identified 112 colonists within the forest limits, produced agreements to change the limits, and elaborated and approved a management plan by the MAE.
- Four microcredit schemes established by FCAE in four communities.
- The formal publication of numerous books and manuals, including:

- Mejia, O. 2007. Guía de Manejo de Un Pez Nativo del Chocó: la Mojarra (*Cichlosoma ornatum*). Altrópico Foundation, Quito.
- Morales, M. 2004. Guía Metodológica para la Formación de Paralegales Comunitarios. ECOLEX, Quito.
- ECOLEX. 2003. Nuestros Derechos y Nuestras Responsabilidades. ECOLEX, Quito. (Printed for the Awá, Cofán, and Waorani nationalities and translated into their respective languages.)
- Garcia, J.G. (editor) 2007. Territorios Ancestrales, Identidad, y Palma: Una Lectura Desde las Comunidades Afroecuatorianas. Altrópico Foundation, Quito.
- Yepez, P., S. de la Torre, C. Cerón, and W. Palacios. 2004. Al Inicio del Sendero: Estudios etnobotánicos Secoya. Ed. Arboleda, Quito.
- De la Torre, S. and P. Yepez. 2007. Caminando en el Sendero Hacia la Conservación del Ambiente y la Cultura Secoya. VIHOMA, Quito.
- Revelo, N. and W. Palacios. 2005. Avances Silviculturales en la Amazonia Ecuatoriana: Ensayos en la Estación Biológica Jatun Sacha. Jatun Sacha Foundation and CAIMAN, Quito.
- ECOLEX. 2007. Lineamientos Básicos para el Acceso a los Recursos Genéticos. ECOLEX, Quito. (Produced in Waoterero (Waorani) and A'inge (Cofán).)
- Organizing several conferences and cofinancing others. Two organized by CAIMAN — “The Link Between External Support and Indigenous Societies of the Ecuadoran Tropical Rainforest” and “Conservation and Indigenous Territories” — were especially well-received. Both contributed greatly to the bank of knowledge about indigenous peoples and conservation in Ecuador and featured original presentations, important and controversial themes, and active participation by indigenous peoples. The conferences were catalysts for new thinking about conservation and indigenous peoples in Ecuador.
- CAIMAN organized two international training visits with indigenous leaders. The first was to community-managed forest concessions in the Maya Biosphere in Guatemala, and the second to the community-managed Chalalan Lodge in Bolivia’s Amazon region. Ten participants from four different indigenous nationalities participated in each visit.

CHAPTER SIX

HIGH-LEVEL INDICATORS: WHAT DOES IT ALL MEAN?

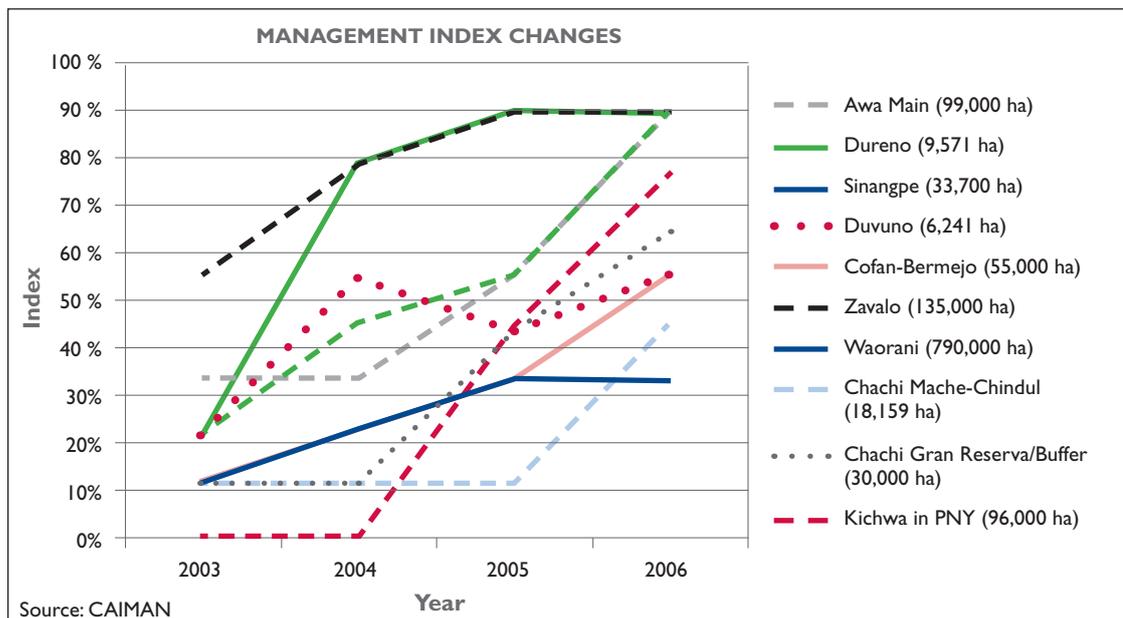
CAIMAN's overall objective of biodiversity conservation in indigenous territories is the parameter against which its work must be judged.

Measuring actual changes in biodiversity in the timeframe and vast areas in which CAIMAN (and other projects) worked is impractical. Indicators based on measurements of actual changes in biodiversity are better suited to academic studies, as they are not cost-effective for a project like CAIMAN. This is why conservation indicator specialists³³ recommend measuring impacts on conservation via proxy indicators on the reduction of threats to biodiversity. The implicit hypothesis is that if harmful pressures are reduced, biodiversity will benefit. In other words, process indicators should be used.

In light of this, CAIMAN's working hypothesis was that biodiversity in indigenous territories will be conserved if they remain under the control of indigenous peoples. This hypothesis, however, is not always true. Indigenous peoples are not necessarily conservationists. In fact, vast areas of indigenous territories in Ecuador are depleted of fauna. Conflicted by increased household needs, Western values and consumption patterns, and modern tools and machinery, indigenous peoples can cause or allow considerable damage to ecosystems. For example, the Waorani permit illegal logging in their territory, the Secoya have turned significant areas of forest into pasture, the Kichwa in Yasuni National Park hunt for the market, and the Chachi sell timber to middlemen.

³³ Margoulis, R. and N. Safasky. Undated. "Is My Project Succeeding?" Biodiversity Support Program, USAID.

FIGURE 8. ANNUAL CHANGES IN CAIMAN'S TERRITORIAL MANAGEMENT INDEX



The index is composed of 10 elements related to territorial management.

But there is a strong cultural inertia that prevents the wholesale adoption of Western values and practices by indigenous peoples. They often do not wish to be like colonists, preferring to retain their own culture and lifestyle. This is why helping them maintain control over ancestral lands is a valid strategy for biodiversity and cultural conservation. This strategy can buy time to develop mechanisms that reward indigenous peoples for the environmental services they provide and their vast knowledge of tropical forests.

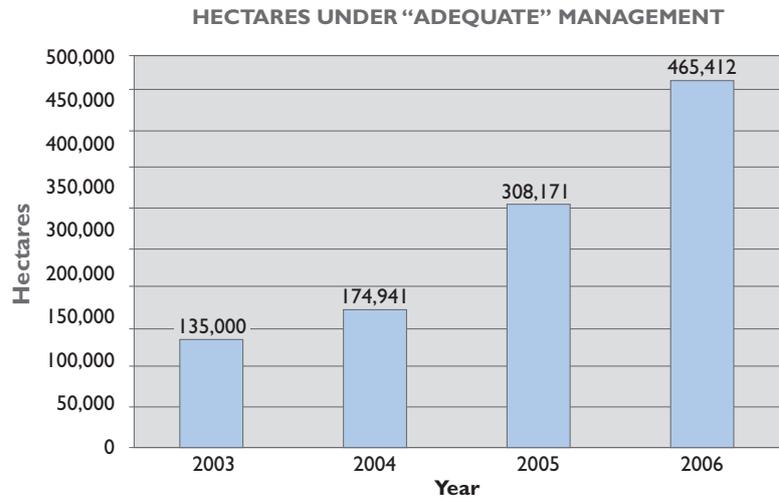
CAIMAN thus reasoned that indicators reflecting indigenous control of their territories are

related to the status of biodiversity conservation. Because such control incorporates several elements, CAIMAN developed a management index of nine milestones,³⁴ some of which are shared with the territorial control index discussed previously. The index value is the percentage of milestones achieved.

Using the management index, CAIMAN defined two indicators: hectares under “improved” management and hectares under “adequate” management. Hectares were measured annually and considered “improved” when the index value for a given area increased by 20 percent.

34 These elements are: 1) resource- or land-use rights or title secured, 2) demarcation of vulnerable boundaries, 3) indigenous peoples benefiting from sustainable natural resource use, 4) systematic vigilance or control at strategic entry points, 5) participatory resource/territorial management plan, 6) conflicts mitigated or mitigation mechanisms in place, 7) community resource-use regulations enforced, 8) sustainable financing for territorial management or protection, 9) resource/land-use plan implemented.

**FIGURE 9. HECTARES (CUMULATIVE)
UNDER “ADEQUATE” MANAGEMENT**



“Adequate” management is achieved when the management index reaches the 50% threshold.

Source: CAIMAN

Measurement was cumulative, so it could take several years to attain “improved” status. “Adequate” management was achieved when the index surpassed 50 percent.

An indicator simply indicates movement toward or away from a goal or objective. It is not a perfect reflection of reality. Nonetheless, CAIMAN’s management indicators captured the project’s overall impact.

Figure 8 shows annual changes in the management index. The Awá and Cofán territories, with the exception of Duvuno, experienced constant improvement during the project.³⁵ These changes resulted from stronger legal rights, regular vigilance, delimitation, conflict mitigation, and participatory territorial management plans. In some cases,

communities reaped additional benefits from improved natural resources management and subsistence activities.

There were steep improvements in the index of the two Chachi areas. For Chachi communities in the Mache-Chindul Ecological Reserve, improvements stem from the resolution of long-standing conflicts and the demarcation of territorial boundaries. In the Gran Reserva Chachi, it was the implementation of a regular vigilance program and conservation finance mechanism. Baseline data for the Kichwa communities in Yasuni National Park are questionable, as CAIMAN started work there in late 2003. Nonetheless, the steep climb from 2004 to 2006/7 is a result of CAIMAN’s alliance with the Wildlife Conservation Society, which led to the attain-

³⁵ CAIMAN cannot claim sole credit for all improvements because its project strategy explicitly included alliances with other organizations.

ment of legal rights, delimitations, conflict resolution, and territorial management plans. In Waorani territory, improvements came from the delimitation of vulnerable boundaries and conflict resolution.

Figure 9 shows the cumulative number of hectares that met or surpassed CAIMAN's threshold for "adequate" management. In a way, the figure summarizes one of CAIMAN's overall contributions to biodiversity conservation.

When CAIMAN started, only 135,000 hectares were "adequately" managed, and all of this

area was contained in the Cofán community of Zavalo under a talented local leader. Increasing each year, the number of hectares under "adequate" management more than tripled by 2006/7.

Despite some clearly positive results, it is important to remember that indigenous territories are in a dynamic situation. Threats and pressures absent during CAIMAN may appear at any time. Second, CAIMAN's "adequate" management threshold is arbitrary. Not all elements of the management index are equal in importance, so a given area may reach the threshold yet still lack a key management element.

CHAPTER SEVEN

LESSONS LEARNED

CAIMAN's nearly five years of work in Ecuador with indigenous nationalities and more than 30 organizations yielded a wealth of lessons, a selection of which are presented below. This is not a typical list of lessons learned that are (or should be) common knowledge; instead, some of these lessons challenge widely held views.

- There is considerable variability within ethnically and culturally defined indigenous peoples, and these variations reach down to the community level. The Cofán communities of Zavalo and Duvuno, for example, are as different as conservative Utah and liberal Massachusetts. Therefore, no one approach fits all situations. Project implementation must be iterative and flexible.
- Changes in the political leadership of indigenous fed-

erations may hinder progress. Organizations with inadequate or nonexistent regulations, procedures, and strategic goals may be unable to separate political transitions from administrative processes. As an example, changes in leadership at ONWAE reversed many of its previous achievements, while FEINCE's leadership transition was relatively smooth because it had a strategic plan and institutionalized administrative and financial rules and procedures. It may be helpful to have alternatives to federations as vehicles to work with indigenous populations. This was particularly true with the Waorani, where CAIMAN supported the creation of a women's organization.

- Commercial enterprises may be incompatible with some indigenous societies' traditional economies that are

based on barter and exchange of gifts and favors. Complicating this is the fact that natural resources are communally owned, but without appropriate mechanisms in place, their economic benefits accrue to individuals, not the community. Creativity is necessary to integrate traditional economies and communal resources with profit-motivated enterprises.

- Lack of infrastructure to breach the long distances to markets makes economic activities even more difficult. For example, the cost to transport bamboo from Duvuno to Guayaquil renders this activity impossible. Therefore, market products must focus on nonperishables and high-value products with low volume and weight, such as handicrafts. Livelihood activities should also focus on food self-sufficiency and not just income generation.
- One of the few viable options for increasing household income is ecotourism. However, given the limited capacity of indigenous communities to market ecotourism services and administer operations, tour operators and indigenous enterprises and associations must partner to make ecotourism viable.
- Increased income is not synonymous with improved livelihood. CAIMAN's work with the Wildlife Conservation Society revealed that household nutrition has actually declined in some Kichwa communities that now participate in the market. Instead of using increased income to diversify and improve food quality, the Kichwa sell high-quality protein to buy starchy foods like pasta and rice. Increases in income and market linkages must be accompanied by education on nutrition and other aspects of Western-like consumption.
- Indigenous communities are neither culturally nor ethnically monolithic. Marriages between different ethnic groups create tensions and competing alliances; in some cases, religious schisms exacerbate these problems. Understanding these dynamics is crucial to community activities and national politics.
- The dearth of well-trained leaders impedes indigenous institutions. It is crucial to identify well-meaning, capable individuals and develop their leadership skills.
- Indicators and the drive for results must be balanced with a respect for the processes that introduce new concepts to indigenous societies. A case in point is the creation of commercial enterprise with indigenous groups for which a cash economy is a novel concept, where communal resource ownership must be reconciled with individual interests.
- Oil companies can be important protagonists, as is the case with the Waorani. CAIMAN found it useful to coordinate

strategies, especially in efforts with ONWAE, and was often able to act as a broker. But the history of handouts and lack of accountability with the oil companies made it challenging for Waorani leaders to learn to use CAIMAN's accounting procedures.

- The concept of “community,” as conceived of by outsiders, has limited application to some indigenous peoples. Although indigenous peoples form temporary alliances for specific reasons (for example, to build a school, clear a plot, or build a house) beyond the needs of the immediate family, the unit of production and survival is always the family.³⁶ Working together on a group
- enterprise beyond the clan or family is a novel concept.
- The lack of national enabling conditions in Ecuador compromises the viability of local actions. A glaring example is the massive market for cheap illegal timber, which undermines low-impact harvesting by indigenous communities.
- The concept of equality that permeates some indigenous societies can have negative practical consequences when carried to the extreme. The expectation that all members of a community should benefit equally can stifle initiative and prevent participation in nontraditional income-generating activities.

³⁶ The concept of immediate family referred to here is flexible and may go well beyond the parents and children to encompass grandparents, uncles, etc.



TROPIC JOURNEYS IN NATURE / LAURENT ATTILA

Waorani warrior Moi Enomenga has his face painted for a special occasion. CAIMAN worked with groups like the Waorani, who safeguard biologically important land and vast stores of indigenous knowledge.

CHAPTER EIGHT

THE WAY FORWARD

The ecological and cultural integrity of Ecuador's indigenous territories will continue to be threatened. The Amazon region that houses the Waorani, Cofán, and Secoya will see expanded³⁷ oil exploration and extraction, attracting settlers who rely on hunting, fishing, and agriculture. Oil roads will continue to open access to remote areas and illegal loggers will venture further and further into remote stretches of territory, sometimes with tacit approval from indigenous leaders and government authorities. High international prices for palm oil and loose enforcement of environmental laws threaten the Chocó region where the Awá and Chachi reside. African palm companies are aggressively expanding their holdings, timber companies continue to work through middlemen as they tap into the resources of indigenous

territories, and land traffickers challenge ancestral rights to indigenous territories.

Faced with these threats, it is critical to continue CAIMAN's work to conserve biodiversity in indigenous territories. This section looks at CAIMAN's intermediate results in territorial consolidation, capacity for conservation, and sustainable financing to recommend actions that are critical and achievable.

TERRITORIAL CONSOLIDATION

The Awá

- Given that the Awá territory is threatened by land traffickers, middlemen, colonists, Afro-Ecuadoran communities, African palm companies, and conflict in neighboring Colombia, the Awá need sustained legal assistance. CAIMAN helped

³⁷ Ecuador's debt interest payments account for about 40 percent of the national budget. Oil exports are its primary source of income and the oil sector is an important employer. The current administration has stated a commitment to expanding the oil frontier.

the Awá secure title to 99,000 hectares of ancestral territory, but the ministerial decree through which it was granted will remain vulnerable unless given a stronger legal status.

- FCAE's sustainable forest management initiative needs support if it is to continue to repel pressure by timber and palm companies. Alternative income opportunities — such as handicrafts, ecotourism, and payment-for-environmental-services schemes — can mitigate these pressures as well as improve livelihoods. FCAE will need continued institutional strengthening assistance to defend the territory and effectively represent the Awá people.

The Cofán

- Most of the Cofán territory is in protected areas, but there is no legal protection for their land. Such legislation would guarantee the rights of the Cofán and other indigenous groups to occupy their territory and manage resources, and clarify state and indigenous responsibilities to conserve the country's natural heritage.
- The Cofán have established a successful indigenous guard force that now requires sustainable financing.
- To reduce their reliance on natural resources, the Cofán need additional income-generating opportunities, such as ecotourism, handicrafts, and the provision of environmental services. Given appropriate legal frameworks, such op-

portunities could also include sustainable forestry and wildlife management.

The Waorani

- Though CAIMAN delimited much of the Waorani boundary, it remains vulnerable. The Waorani will continue to need assistance with delimitation, labeling, and conflict resolution.
- Illegal logging threatens biodiversity and culture and causes intra-ethnic conflict. Without government assistance in regulating and managing logging in the territory, the Waorani will need to partner with oil companies and the armed forces. For the Waorani to create a territorial defense system like the Cofán forest guards would require significant capacity-building and a financing mechanism, perhaps with assistance from oil companies.

The Chachi and the Secoya

- The Chachi territory, like that of the Awá, faces threats on many fronts. The Chachi's considerable progress on resolving territorial conflicts and developing a management plan for its territory in the Mache-Chindul Ecological Reserve will need continued support.
- The Secoya have legal rights to a relatively small territory that they share with the Siona, which has led to many conflicts. The Secoya will require help to resolve these conflicts, consolidate their boundary, and, if possible, increase the area over which they have legal rights.

CAPACITY FOR CONSERVATION

- Every indigenous group with which CAIMAN worked requested educational and capacity-building assistance at the individual and institutional levels. For example, the current educational system is bilingual in theory but not always in practice, curricula are sometimes ill-suited to indigenous children, and teachers are poorly trained. And there is a dearth of qualified Waorani teachers who speak the local language. Solving these problems will require a sustained long-term effort, and with the Waorani, this will require assistance from oil companies and coordination with their bilingual and intercultural education directorate.
- Indigenous federations need increased capacity in technical, legal, and administrative planning. Hands-on training will help them represent and defend the interests of indigenous peoples and strengthen the link between Western and indigenous societies. Such assistance will build the federations' credibility and ability to capture, generate, and manage financial resources.
- Indigenous peoples are newcomers to the market-based economy. They no longer live in isolation from the global society; now they sell handicrafts, ecotourism services, and timber. They require training on the workings of the market, pricing, customer demand,

and logistics to better participate in the market economy. This work is best done not in a classroom but through exposure to and participation in actual businesses, as exemplified by CAIMAN's experience with giant bamboo and handicrafts. The Waorani in particular will also need training on sustainable forest management.

FINANCIAL SUSTAINABILITY

Awá

- Though the Awá are arguably the most impoverished group with which CAIMAN worked, they oversee one of the most biodiverse ecosystems in the world. But the territory has few resources that are valuable to the conventional market. One of the Awá's strongest economic possibilities is the provision of environmental services, particularly biodiversity conservation and hydrological cycle regulation. Options include biodiversity offset agreements with corporations and conservation incentives from conservation organizations or socially responsible companies. A carbon market is also possible. Because the sale of environmental services is little-understood and sometimes controversial, an information campaign is needed, along with a market survey.
- The handicraft effort has been extremely successful, though limited to a small number of beneficiaries. More Awá can enjoy income from handicrafts through further training and an expanded market.

- It remains important to improve the Awa's capacity to meet household food needs; native fish and bee husbandry are promising opportunities.

The Cofán

- CAIMAN helped the Cofán of Zavalo develop a business plan and proposal for ecotourism focused on the Cuyabeno. This opportunity should continue as the business plan is viable despite perceived security concerns.
- The Cofán's handicraft store in Lago Agrío will soon reach sustainability with support to increase sales and improve accounting and financial management. Efforts to improve the appeal of Cofán handicrafts should continue.
- The Cofán have a limited ability to market renewable natural resources because most of their territory is protected. Nonetheless, there is considerable potential to sustainably manage wildlife for subsistence and commercial purposes.
- The Cofán forest guard program captures environmental services provided to the rest of the world. More than 60 Cofán families derive income from employment as guards. While financing of the program has been assured for the next few years, it needs a fiduciary fund to ensure sustainability.

The Waorani

- The Waorani hold considerable timber resources that could become a viable source of sustainable income. Ending the practice of individual Waoranis allowing illegal loggers to extract timber will require a carefully planned approach and help from ONWAE. This will require an information campaign on how the timber market works, the real value of timber, and sustainable management, as well as capacity-building on forestry management and timber extraction. The community will have to address issues such as income distribution and use, ultimately entering into an agreement with a responsible operator to extract timber in a sustainable manner, monitored by the Waorani.
- The Waorani Plan de Vida proposed a fiduciary fund capitalized by oil companies in their territory; the fund would finance activities in health, education, territorial protection, cultural conservation, sustainable natural resource use, and institutional strengthening. The plan must now be vetted at the community level, followed by a participatory process to design and structure the plan and an administrative mechanism for the fiduciary fund. Additionally, the fund could support a forest guard program similar to that created by the Cofán.

TROPIC JOURNEYS IN NATURE / LAURENT ATTILA



A Waorani elder in the Shiripuno area of Waorani territory. CAIMAN helped the Waorani develop sustainable, conservation-friendly sources of income.

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