



EVALUATING THE RESULTS OF OUR WORK

The Centrality of Social Capital: Forestry and Enterprise Development Among the Indigenous Mayangna of Awas Tingni (North Atlantic Autonomous Region, Nicaragua)

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Acronyms

AMASAU	Awes Tingni Mayangnina Sauni Umani
CAMANIC	Cámara de Artesanos y Muebleros de Nicaragua
CIDH	Inter-American Court for Human Rights
COTRAFOR	Forest Workers Cooperative in Awes Tingni
CW	Controlled Wood
FSC®	Forest Stewardship Council®
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
MADENSA	Maderas y Derivados de Nicaragua, S.A.
MAPINIICSA	Maderas Preciosas Indígenas e Industriales de Nicaragua, S.A.
MARENA	Nicaraguan Ministry of Natural Resources and the Environment
NAWPI	North American Wood Products
RAAN	North Atlantic Autonomous Region
RAAS	South Atlantic Autonomous Region
SOLCARSA	Sol del Caribe, S.A.
UNDP	United Nations Development Programme
WWF	World Wildlife Fund

The Multilateral Investment Fund (MIF), a member of the Inter-American Development Bank (IDB) Group, is the largest provider of technical assistance for private-sector development in Latin America and the Caribbean. Its core beneficiaries include micro and small businesses, small farms, and poor and vulnerable households. It designs and finances pilot projects to test pioneering approaches to building economic opportunity and decreasing poverty.

The Rainforest Alliance works to conserve biodiversity and ensure sustainable livelihoods by transforming land-use practices, business practices and consumer behavior.
www.rainforest-alliance.org

PREFACE

Over the last two decades, countries across the tropics have devolved increasing authority over natural forests to local actors. The ability of those actors to manage forests sustainably and make forestry a competitive land-use choice has therefore taken on a growing importance. In response to this changing landscape, a range of efforts around the globe are supporting community-based forest management by working to improve the capacity of local people to manage their natural resources and develop local enterprise. In spite of the abundance of manuals, methodologies and other tools to guide technical assistance, there is a relative paucity of systematic analyses of the results of such efforts: experiences, lessons learned and recommendations for improving assistance to local forestry development.

This case study is one of 10 produced under “Forest Conservation through Certification, Markets and Strengthening of Small and Medium-sized Forest Enterprise,” a five-year project supported by the Multilateral Investment Fund (MIF), a member of the Inter-American Development Bank (IDB) Group. Led by the Rainforest Alliance, the project involves approximately 100 community operations and small and medium-sized enterprises (SMEs) in Guatemala, Honduras, Mexico, Nicaragua and Peru. The project’s central aim is to improve local livelihoods through sustainable forestry and enterprise development. Although the support needs, contexts and development levels of partner communities vary tremendously, the project’s unifying strategy is to improve business capacities, market access and financial support for enterprise development in order to secure sustainable forest management and livelihood development.

The case studies in this series were carefully selected to cover all five countries where the project is active, and to reflect the full range of participants—from highly incipient community operations, to second-tier business alliances among multiple well-developed, certified enterprises. Special attention was also paid to ensuring representativeness with respect to forest ecosystems (temperate and tropical), tenure arrangement (permanent and concession) and production focus (timber and non-timber). In all of the studies, the impact of Rainforest Alliance technical assistance on enterprise development was analyzed, including a critical assessment of priorities for future assistance. Beyond enterprise-specific examples, two studies take a more thematic approach, analyzing experiences with markets for lesser-known species and financial mechanisms.

Taken together, the 10 studies support the growing body of research demonstrating that community-

based production forestry can be an effective approach to conserving forest resources while also generating significant social and economic benefits for marginalized communities. At the same time, however, these studies tell a more nuanced story. The diversity of contexts and enterprises represented sheds light on the development of community forestry in its many forms—towards multiple and sometimes contested goals—while chronicling both successes and failures. As such, each case stands on its own to inform similar cases around the world, while also forming a part of the broader story this series tells about the variable trajectories of community forestry development.

Although a guiding goal of many projects—including the present one—is to achieve financial sustainability for community forest enterprise, the importance of external technical assistance in building local capacities is also clearly fundamental. However, the effectiveness of such assistance is not always optimal, which is why each case includes an assessment of the results of the Rainforest Alliance technical assistance that was received. In several cases, insufficient data and/or a lack of indicator consistency—not to mention confounding external factors (storms, market fluctuations, political upheaval and social conflict) and the absence of truly scientific controls—make it impossible with full confidence to attribute change solely to Rainforest Alliance support, especially given the active presence of other actors at all project sites. This caveat notwithstanding, it is clear that, in each case, project interventions produced concrete results. The studies aim to extract lessons from these results and recommend ways forward.

Finally, while the bulk of these studies have been prepared and published by staff of the Rainforest Alliance, they would not have been possible without the collaboration and dedicated efforts of many others including a host of government agencies, civil society partners, academic institutions and private sector actors. Above all, the communities themselves must be recognized and congratulated for the time that they invested in assisting with the compilation and review of these studies. All contributors are specifically acknowledged in each separate case study. Although the contributions of all of these actors are fundamental, the content of these studies is the sole responsibility of the Rainforest Alliance, except where other institutions have taken a co-publishing role.

The table on the following page presents a breakdown of the 10 case studies that were produced as part of this project.

No.	Case Study	Location	Key Themes
1	Awas Tingni community	North Atlantic Autonomous Region, Nicaragua	<ul style="list-style-type: none"> • Indigenous community forestry • Incipient forest enterprise development • Social and institutional foundations for community forestry
2	Moskibatana non-timber forest product (NTFP) enterprise	Muskitia, Honduras	<ul style="list-style-type: none"> • Indigenous community forestry • NTFP management and Forest Stewardship Council® (FSC®) market development • Development of a new forest enterprise
3	Ejido El Largo	Chihuahua, Mexico	<ul style="list-style-type: none"> • Integrated forestry development planning • Community forest enterprise competitiveness
4	CAIFUL agroforestry cooperative	Río Plátano Biosphere Reserve, Honduras	<ul style="list-style-type: none"> • Local forest enterprise development • Benefits of forest enterprise at the community scale
5	Analysis of forest management in community concessions	Maya Biosphere Reserve, Guatemala	<ul style="list-style-type: none"> • Impacts of certified community forestry silvicultural and management systems • Investments by community enterprises in conservation and monitoring
6	Brazil nut production and enterprise	Madre de Dios, Peru	<ul style="list-style-type: none"> • NTFP enterprise development • Financial and administrative capacity building
7	TIP Muebles	Oaxaca, Mexico	<ul style="list-style-type: none"> • Commercial cooperation among community forest enterprises • Furniture value chain development
8	Tres Islas native community	Madre de Dios, Peru	<ul style="list-style-type: none"> • Indigenous community forestry • Landscape approach • Incipient forest enterprise development
9	Building markets for lesser-known species	Maya Biosphere Reserve, Guatemala	<ul style="list-style-type: none"> • Development of new markets for lesser-utilized commercial timber species • Diversification of a second-tier community forestry business model
10	Financial mechanisms for community forest enterprises	Regional	<ul style="list-style-type: none"> • Design, operation and impacts of mechanisms to increase forestry producer access to credit

The Centrality of Social Capital: Forestry and Enterprise Development Among the Indigenous Mayangna of Awas Tingni



Entering the
community of
Awas Tingni

*Photo by
Eugenio Fernández
Vázquez*

Like many countries in the global south, Nicaragua is devolving control over forest resources to regional authorities and local communities. In the country's Atlantic Coast region, which contains three-quarters of Nicaragua's remaining natural forest, a process of indigenous land titling has been going on for more than five years. Given that most of the region's land is forested and under some form of customary tenure, the devolution process has major implications for the future of the country's forest resources. Indigenous land titling has set the stage for community-based forestry across a large area of natural forest. The changes underway are both regionally and internationally important.

To conserve forest resources, local communities must be able to make sustainable forest management a competitive land-use alternative. Therefore, it is of critical importance to improve local capacity for the development and management of community forest enterprise. The Rainforest Alliance works to improve the competitiveness of such enterprises by building local capacity for forest management, value-

added production, business administration, financial management and market access.

The present case study focuses on the indigenous Mayangna community of Awas Tingni, which has one of the longer histories of organized community forestry in Nicaragua, predating the national land-titling policy by about 15 years. Since 2007, the Rainforest Alliance has been working in Awas Tingni to develop community forest enterprise—most recently with support from IDB/MIF. Given the nearly 20-year history of community-based efforts around forestry in Awas Tingni, the gathering pace of indigenous land titling throughout the region and the support of IDB/MIF, it is worth examining the major events, partnerships, outcomes and changes in enterprise organization and forestry operations within the community—particularly as other communities in Nicaragua and beyond are starting to establish their own forest enterprises.

The central finding of this case study is that a continuing lack of social cohesion threatens to under-

mine the potential for community forest enterprise development, despite the important progress that Awas Tingni has made in obtaining the rights to customary lands and improving certain enterprise metrics. It is urgent to address the core social and organizational issues discussed in this analysis if the community is to realize the full array of potential benefits that sustainable forestry and local enterprise can offer.

Additional key findings and lessons learned from this case study include the following:

- Awas Tingni has played a nationally and regionally important role in the struggle to recognize indigenous land rights. Despite winning legal tenure, in recent years Awas Tingni has seen dramatic increases in incursions into its community lands by outsiders, resulting in the conversion of natural forests. Illegal land occupation and deforestation threaten the integrity of its indigenous lands and undermine the development of community forest enterprise.
- Although Awas Tingni maintains the legal basis for community forest enterprise, decision-making on forest management matters is still largely controlled by outside actors and a relatively small number of community elites. Burdensome and redundant regulatory requirements, which have sometimes been applied in an ad hoc and politicized manner, coupled with overly complex bureaucratic processes (due in part to nascent territorial and regional institutions) have conspired to hamper operations and undermine enterprise efficiency.
- A continuing disarticulation between Awas Tingni's territorial and community leadership, and the forestry cooperative, which was established to develop the enterprise, undermines the community's capacity to assert equitable and representative local control over its forest resources. Lack of a unified vision for community forestry and operational decision-making related to the enterprise also generates confusion with regard to forest management and commercial relationships.
- Thanks to the availability of investments from outside the community and growing interest among responsible wood buyers in the region, Awas Tingni is in a position to achieve sustainable forest management and produce a diversified range of value-added material for domestic and international markets. However, foundational issues surrounding social organization, participatory forest planning and operations, and local capacity for product development and business administration must be addressed before the community's substantial potential for forest development can be realized.
- Rainforest Alliance technical assistance has helped the community's cooperative achieve notable advances with respect to efficiency, value-added production and negotiations with buy-

ers. Of particular note are improvements in primary transformation techniques and negotiations that resulted in a two-fold increase in enterprise revenues during the period analyzed in this study. Such gains, however, are at risk of being eroded by continuing social and institutional problems that endanger the future of forest enterprise in Awas Tingni.

- The efficacy of technical assistance efforts has been constrained by various factors, including the periodic nature of funding, staff turnover and the lack of continuity of support.

Based on these findings, a number of recommendations are proposed:

- If desired by the community, Awas Tingni should be supported in the process of developing and agreeing on a community-cooperative compact. Such an agreement could include the re-election of the cooperative's board of directors and an expansion of its membership. Achieving a single, unified forestry operation with clear internal rules, a prescribed role in the wider community and a territorial governance structure is fundamental to ensuring that forest management is sustainable and benefits the entire community equitably.
- The community should revise its current forest management plan, which was first drafted in 1992 by one forestry company and recently updated by another. Once there is agreement on a unified local forestry authority, Awas Tingni could redraft the plan within the context of its wider territorial land-use plans, local forest use and values, and the community's long-range objectives for the protection of its land title, forest management and enterprise development. In conjunction with participatory planning and technical training processes, Awas Tingni could produce a forest management plan that reflects the community's values and exercises the full extent of its hard-won indigenous rights.
- Outside investments in forest enterprise development (infrastructure and/or technical assistance) need to be better aligned with overall community capacities and priorities, and embedded into an investment plan that is based on a long-range community vision. Technical assistance on forestry issues should focus as much or more on foundational social and organizational priorities as it does on the achievement of forest management and sales metrics.
- Targeted support from technical assistance agencies will be essential to achieving the above steps, as well as to negotiating a streamlined process for overseeing forest management and trade. Joint planning is necessary to ensure that such support is complementary.



Methods

Research methods for this case study comprised interviews and the review of key documents, including internal Rainforest Alliance reports dating back to 2007, as well as reports generated by other organizations that have provided technical assistance to Awas Tingni and groups working more broadly on forestry in Nicaragua. Published literature was also consulted, in Spanish and English, including academic articles and pieces aimed at broader audiences. A list of references is included in Annex I.

Additionally, key indicators were updated and examined using the Rainforest Alliance's baseline evaluation methodology, which logs relevant socio-economic, forestry and enterprise data points. Beyond basic indicators related to community population, land use and livelihoods, the study also looked at data on forest production, processing efficiencies, business administration, market linkages and enterprise performance. With the help of local counterparts, data was updated for the analysis period and evaluated to identify areas where observed changes were significant.

Interviews took place in several phases. First, a focal group session was organized for a semi-structured interview/group discussion in the community of Awas Tingni. Second, individuals with intimate knowledge of the Awas Tingni case were interviewed on various topics related to their expertise. Third, one-on-one follow-up interviews were conducted during the drafting phase to gather specific data points and perspectives. A list of those interviewed is presented in Annex II.

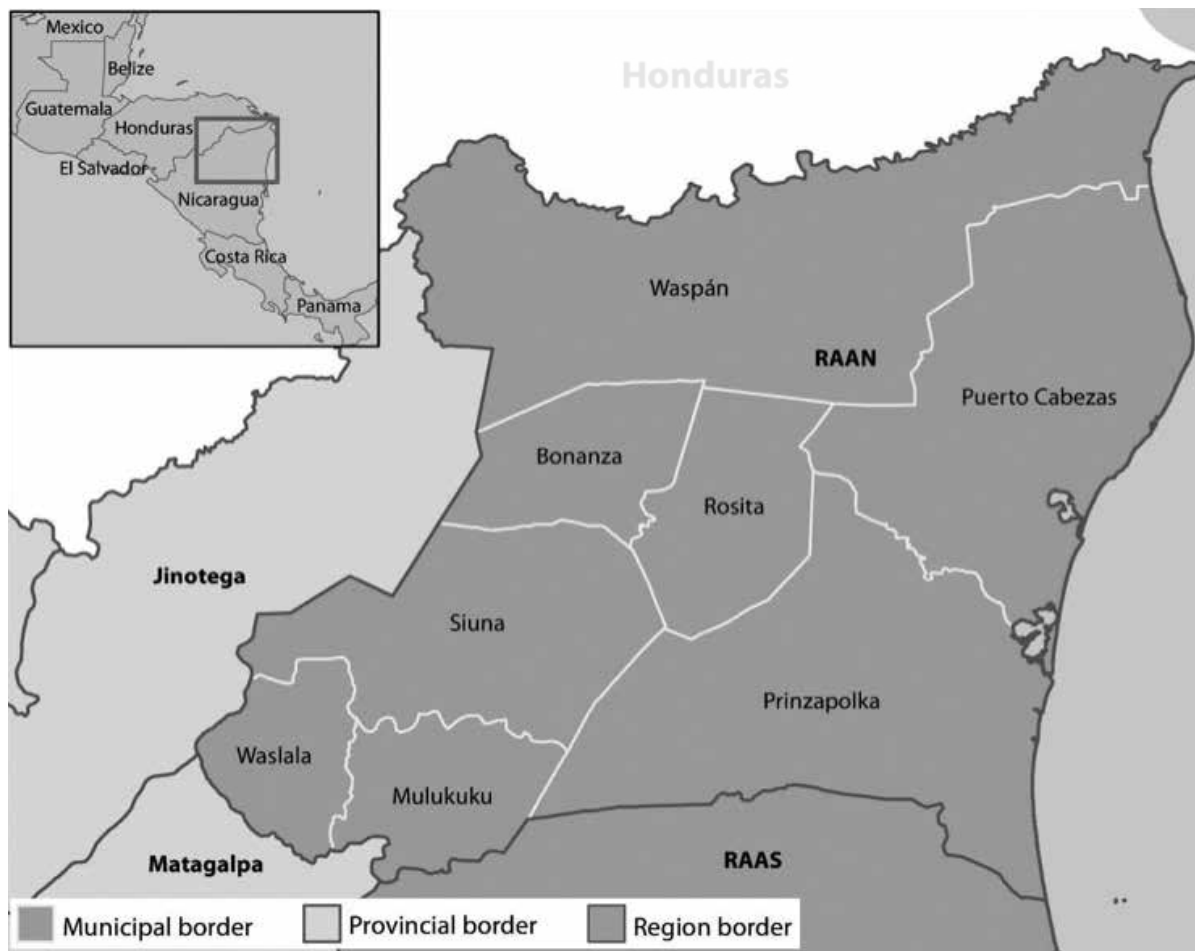
The Rainforest Alliance and Community Forest Enterprise

The Rainforest Alliance is an international environmental non-governmental organization that is active in more than 100 countries around the globe. The organization's mission is to conserve biodiversity and ensure sustainable livelihoods by transforming land-use practices, business practices and consumer behavior. Core sectors are forestry, agriculture and tourism, complemented by cross-divisional support programs that focus on climate, sustainable finance, education, and evaluation and research.

In the forestry sector, the Rainforest Alliance works with forest communities to maintain ecological values and ecosystem services in their forests, helping them to implement low-impact management practices, protect and buffer high conservation value areas and plan silvicultural activities that mimic natural regimes of disturbance and regeneration. Community forest management operations learn about and apply best management practices benchmarked against FSC standards, which ensure compliance with local and national laws; clarity with respect to tenure, access and indigenous rights; the enhancement of worker safety; equitable benefit-sharing; and monitoring of the implementation of their forest management plans.

To live up to its name, sustainable forestry must ultimately turn a profit, which is a major challenge for community operations. For this reason, the Rainforest Alliance provides technical assistance to forest communities and SMEs to help build local capacities in forestry enterprise management and markets. In order to invest in best management practices and make forestry a viable land-use alternative, these operations must achieve economic

Figure 1
 Nicaragua's RAAN
 and municipalities
Mairena et al. 2012



competitiveness. To date, the Rainforest Alliance has provided assistance to more than 150 community forestry operations and SMEs, covering close to 3.5 million hectares in 18 countries in Africa, Asia and Latin America.

In 2010, with support from IDB/MIF, the Rainforest Alliance began implementing the project “Forest Conservation through Certification, Markets and Strengthening of Small- and Medium-sized Forest Enterprise” (henceforth referred to as “the project”).

Context

Situated in northeastern Nicaragua, the North Atlantic Autonomous Region (RAAN, by its Spanish acronym) anchors a large intact block of tropical forest. Of the region’s total land area (32,000 km²), nearly 75 percent is forested, representing more than 40 percent of Nicaragua’s total forest estate and nearly 70 percent of its primary forest. The RAAN includes a range of ecosystems—from pine woodlands and mangroves to humid tropical forest—and houses a host of endemic and globally threatened species.

The RAAN’s biological diversity is matched by its rich cultural history and ethnic makeup. Nearly a third of its 400,000 inhabitants self-identify as indigenous, the largest groups being Miskitu, Mayangna

(sometimes divided according to the use of the Panamaska or Tuashka dialects), Ulwa and Rama. Non-indigenous people are either mestizo (of mixed indigenous and European heritage) or creole (Afro-descendant Caribbean). In reality, however, ethnicity is not so clearly delineated. A 300-year history of intermingling and cultural fusion has produced a population that is very mixed, both in rural and urban areas. The extent to which a person of Miskitu heritage, for example, may self-identify as either indigenous (“Tawira”) or creole (“Miskitu Sambu”) speaks to the RAAN’s complex and evolving ethnic reality.

There is little documentation about the pre-conquest history of the area. It is thought that what is now known as the RAAN was divided into two “provinces” and then subdivided into a half-dozen smaller units, along linguistic lines and by geographical boundaries, but there were few power centers or formal entities that ruled large areas. Despite many attempts by the Spanish crown, Spaniards never settled the Atlantic Coast. Miskitu communities strongly resisted subjugation, instead formalizing an alliance with the British in 1740. This alliance led to British settlements along the Miskitu Coast, the development of plantations (to which slaves were brought from Africa) and the first commercial timber extraction. With the independence of several Central American states in the 1820s, Britain negotiated recognition of the Miskitu

Kingdom as its protectorate, partly to ensure unfettered access to mahogany.

After years of rising tensions over access to resources, which increasingly involved the US, the 1860 Treaty of Managua ceded control of the Miskitu Coast to Honduras and Nicaragua (although the British did not fully leave the Atlantic Coast until the signing of the Harrison-Altamirano Treaty in 1905.) The logging industry grew substantially in the years after the RAAN'S incorporation into Nicaragua. North American logging interests became the principal economic actors on the Miskitu Coast along with banana companies like Standard Fruit. By 1926, Bragman's Bluff Lumber Company—a Louisiana-based subsidiary of Standard Fruit that was based near what is now the RAAN's main town, Puerto Cabezas—was Nicaragua's largest single employer, with some 3,000 employees. The company invested \$5 million in the area during the 1920s, building a railroad, importing a US-made sawmill and installing port facilities, but its concession in the pine savannahs northwest of Puerto Cabezas created conflict with Miskitu communities. With the advent of Augusto Sandino's revolution in the late 1920s and early 1930s, Bragman's Bluff and other companies became frequent targets of rebel attacks, as the Miskitu joined forces with Sandino's troops (Wani 2004).

In 1934, when Sandino was killed and his rebellion put down, Nicaragua was taken over by the Somoza family, a dictatorship that lasted until 1979. The Somoza regime frequently awarded forest concessions to US firms (which were mainly focused on pine production) and to powerful mestizo Nicaraguans. The first documented case of Awás Tingni's customary lands being awarded as a for-

est concession (to a private individual who owned a timber company) occurred during the 1950s. Beginning in 1978, the Nicaraguan Revolution resulted in significant upheaval in the RAAN. By the early 1980s, many communities fled to Honduras to escape the fighting between the Sandinistas and the US-backed Contras. In 1982, residents of Awás Tingni were evacuated to Honduras, and it wasn't until the signing of the Esquipulas Peace Agreement in 1987 that many community members returned.

Autonomy and Indigenous Land Titling in the RAAN

As the civil war drew to a close and peace negotiations began, the issue of indigenous rights came to prominence. Such rights were formally recognized under the Nicaraguan Constitution, which was enacted in 1987, and bolstered by the Autonomy Statute, which passed the same year and set the stage for the establishment of the RAAN (as well as the South Atlantic Autonomous Region, known as the RAAS). In 1990, regional councils were elected for the first time, but despite constitutional recognition, many years passed before the RAAN took meaningful steps towards autonomy. A succession of governments in Managua refused to grant real decision-making power or funds to regional authorities.

Meanwhile, however, a movement was growing to demand indigenous land titling in the RAAN. The community of Awás Tingni played a central role in this movement. Beginning in the mid-1990s, with support from the World Wildlife Fund (WWF) and legal advice from the University of Iowa's law school, Awás Tingni fought to revoke a forest concession that had been granted by the Nicaraguan

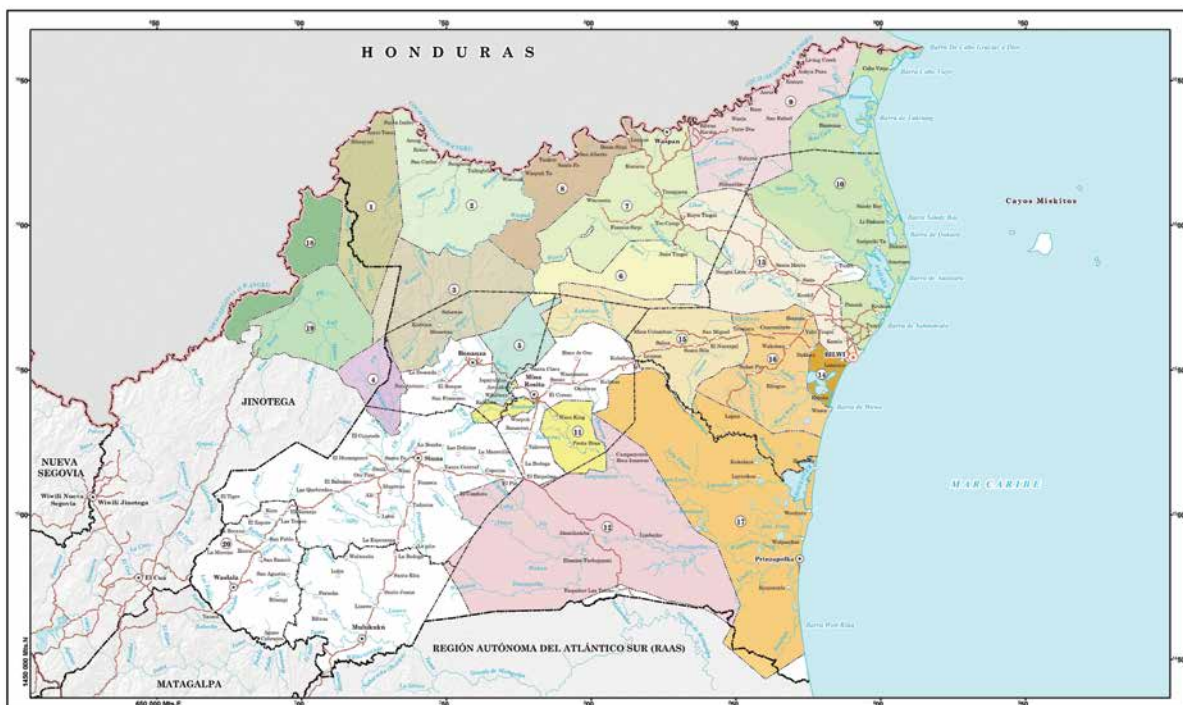


Figure 2
Indigenous territories in the RAAN, RAAS and Jinotega; Awás Tingni is territory 6
GIZ/MASRENACE

Table 1
Indigenous territories in the RAAN
(as of 2013)

No.	Region/Name of territory	# of communities	Population	Area (ha)
1	Kipla Sait Tasbaika Kum	14	5,164	113,597.00
2	Li Lamni Tasbaika Kum	26	9,103	138,227.00
3	Wangki Li Aubra	18	7,991	88,434.78
4	Awas Tingni	3	2,110	73,394.00
5	Mayangna Sauni As	16	10,000	163.81
6	Sikilta	1	870	43,241.40
7	Kipla Sait Tasbaika Kum	14	8,718	54,556.36
8	MATUNBAK	8	4,743	48,723.14
9	Wangki Twi	21	18,117	162,181.60
10	Prinsu Awala	19	5,372	414,955.40
11	Wangki Maya	22	16,596	138,881.86
	TOTAL	216	88,784	1,276,193.00

government to a Korean-owned firm on the community's traditional lands. Although Nicaragua's own Supreme Court found the concession to be unconstitutional, the community's attempts to remove the concessionaire were unsuccessful, and the case eventually ended up before the Inter-American Court for Human Rights (CIDH). In August 2001, the CIDH ruled in favor of Awas Tingni and ordered the Nicaraguan government to pay reparations, and to demarcate and grant the community title to the land (Anaya and Crider 1996).

The decision was a landmark for indigenous rights, in Nicaragua and across the Americas, and paved the way for indigenous land titling throughout the RAAN because it required the state to pass legislation to grant titles to all indigenous groups in the country. As a result, the Communal Lands Law was passed in 2002, followed the next year by legislation that enabled implementation of the titling process, setting the stage for "full recognition of rights over communal property." Actual titling took several more years before it got underway in earnest—when Daniel Ortega's Sandinista Party returned to power in 2007, in part because of its alliance with

the Miskitu political party Yatama (Larson and Lewis-Mendoza 2012).

One of the key aims of many who supported land titling was to stem the tide of deforestation in the RAAN, which had accelerated in the 1990s well into the new century. With much of the Pacific Coast already deforested and settled, a classic agricultural frontier scenario took shape along the western borders of the RAAN and RAAS, as colonist mestizo farmers converted untitled forestland to agricultural cash-crop and livestock operations. This led to Nicaragua having one of the highest deforestation rates in the world; between 1990 and 2010, the country lost an average of 70,000 hectares per year, amounting to more than 30 percent of its forest cover in just 20 years. Much of this deforestation occurred in the RAAN.

Since 2007, the titling process has moved quickly; by September 2013, more than 2.2 million hectares in the RAAN, RAAS and Jinotega Department had been titled, including 15 territories encompassing a total of 216 communities. Titled lands now amount to about half of the region's total land area. The

quick rollout was due to several factors, including the political importance of recognizing indigenous territories within the context of the Sandinista alliance with Yatama. Equally compelling—and often cited by territorial authorities—is the recognition that a lack of clear tenure impedes local development and is a key cause of deforestation in the region. This view is buoyed by the early and positive results generated by indigenous land titling in the Bosawas Reserve, in adjacent Jinotega, where deforestation rates are now significantly lower than in non-titled “protected” forest (Hayes 2008).

Given that nearly all of the RAAN (and much of the RAAS) falls under traditional tenure, a large majority of the Atlantic Coast’s forests will eventually be placed under some form of communal ownership. While the extent of the shift is not comparable to the area currently under indigenous title in the Amazon Basin, for example, the intent to title nearly half of Nicaragua’s land area to indigenous groups is globally significant. Since the vast bulk of Nicaragua’s forest resources is concentrated on the Atlantic Coast, it is vital that local communities have the capacity to manage their forests.

The Awas Tingni Community

Situated along the Wawa River in the RAAN municipality of Waspán, the indigenous community of Awas Tingni Mayangnais is made up of about 360 families, representing approximately 2,100 people. Beyond its indigenous inhabitants, Awas Tingni also includes an estimated 4,200 mestizo colonists who are illegally occupying and clearing lands within the community’s territory.

Awas Tingni’s customary lands cover an estimated 136,000 hectares. After a protracted legal battle and titling process, it received official title over a

73,394-hectare area in 2008, which includes 73,000 contiguous hectares plus a 394-hectare parcel known as Tuburus, situated to the north. Believed to be the location where the community’s ancestors first settled, Tuburus is of great cultural importance to the people of Awas Tingni.

A majority of Awas Tingni’s territory is forested, although this is changing rapidly due to colonist invasions. As with many indigenous groups around the world, the people of Awas Tingni rely on the forest for their livelihood. Nearly all households grow the majority of their food. Most agricultural production is swidden and focused on beans, rice, corn and plantains, as well as a number of other products that are intercropped and/or introduced during fallow periods when the soil is recovering. Most residents engage in subsistence farming, and relatively little of what’s grown is sold at market, although local trade and barter is common. A small number of families also raise cattle.

Many households in Awas Tingni complement their livelihoods with forest-based hunting, fishing and NTFP collection. Peccary hunting in particular is a communal economic and cultural activity of historical importance that takes place deep in the forest, goes on for long periods and is strongly tied to Mayangna spiritual identity. Peccary meat is also an important source of cash from market sales (Acosta 2004; University of Arizona College of Law 2003).

Like most RAAN communities, Awas Tingni remains very poor, lacking access to basic services like healthcare, education, clean water and electricity. Recent years have seen some progress in education and healthcare, and a new project has resulted in the installation of solar panels, but more than 90 percent of its members are still classified as poor by



Awas Tingni is home to significant stands of pine forest

Photo by Eugenio Fernández Vázquez

the Development Information Institute of Nicaraguan (INIDE), and over 60 percent are considered extremely poor (Mairena et al. 2012).

As notable as such economic indicators are, there is an important wealth of cultural pride and independence that is central to community identity. Even though Miskitu and mestizo groups have surrounded and increasingly encroach upon Awás Tingni's lands and traditional livelihoods, the Mayangna of Awás Tingni maintain a strong commitment to conserving their culture and language (although Miskitu and Spanish are relatively widely spoken).

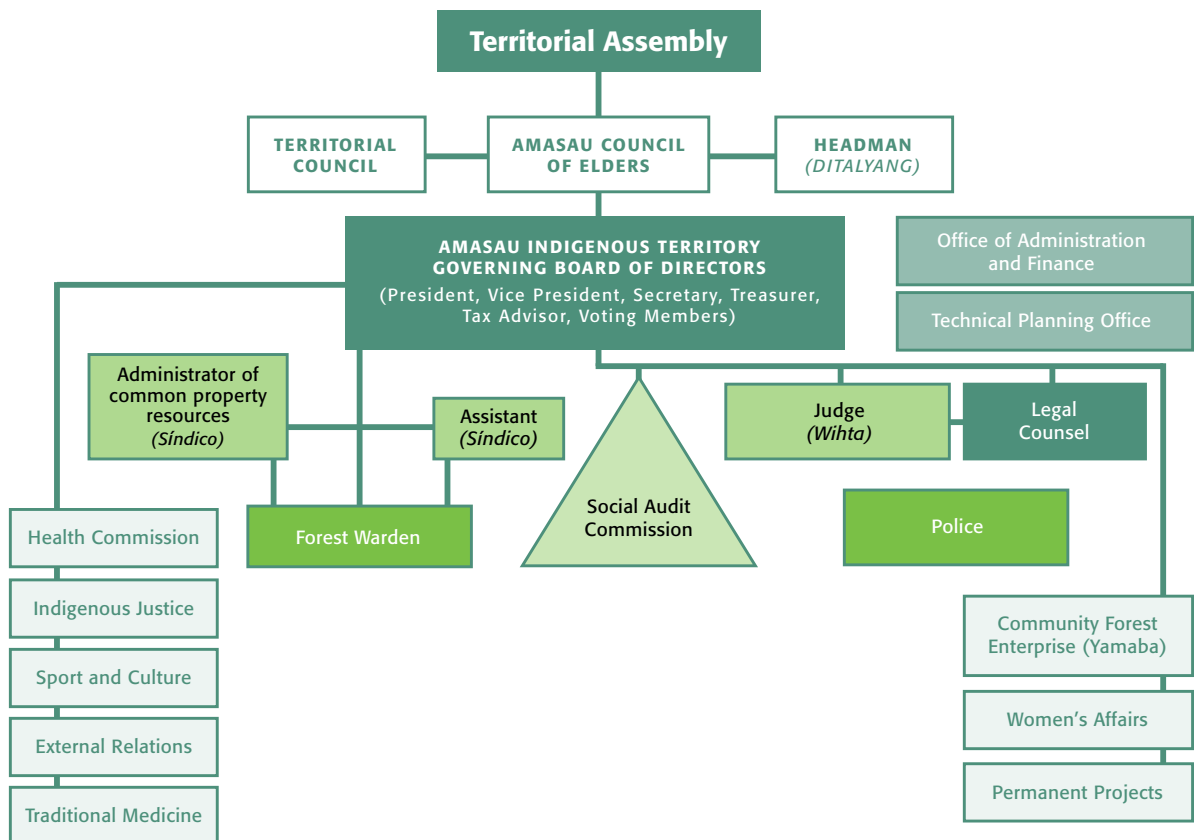
Awás Tingni has a complicated governance structure, which attempts to integrate a very strong traditional authority with state-recognized agencies, while also incorporating fledgling territorial actors (Peña Gama and Tamayo Pérez 2009). The organigram below summarizes the main actors and positions that make up the local governance structure.

nity judge and the *síndico* (the common-property resources administrator). Although the *síndico* is responsible for overseeing transactions relating to forest resources, the creation of a community forest enterprise in Awás Tingni introduced a new actor into the mix—one that has both internal and external legitimacy and powers—to undertake and execute forestry activities. This has complicated forest governance within the community.

The Forest Resource

Situated in a humid lowland tropical-subtropical forest area, with high levels of annual precipitation (2,600 mm on average), most of Awás Tingni's 73,000 hectares remains forested. The dominant formation is tropical broadleaf evergreen, with diverse multi-tiered stands that typically reach 30 to 35 meters in height and some emergents that reach as high as 40 meters. A 2000 study of forest composition by the Centro Agronómico Tropical de Investigación y

Figure 3
Awás Tingni local
governance
structure



The top decision-making authority is the territorial assembly, which governs the 73,394 hectares titled to Awás Tingni Mayangnina Sauni Umani (AMASAU), composed of a committee of traditional elders, the community headman and an elected territorial council, as well as the elected members of AMASAU's board of directors, who face three-year term limits. The board coordinates internal community matters with traditional authorities such as the commu-

Enseñanza (CATIE) identified three types of broadleaf stands made up of 126 different species, which are broadly correlated with soil conditions and slope (Pérez Flores et al. 2000). A recent forest inventory identified 114 species within the sampled broadleaf forests (DUSA 2013). Pine-dominated woodlands cover relatively small areas, with the main species being Caribbean pine (*Pinus caribaea* var. *hondurensis*).



The most important commercial timber species used to be Spanish cedar (*Cedrela odorata*), mahogany (*Swietenia macrophylla*), comenegro (*Dialium guianense*) and santa maría (*Callophyllum brasiliense*). After decades of commercial harvesting, as well as the impact of Hurricane Felix in 2007 (see page 15), much of the Spanish cedar and mahogany have been logged (although there is good regeneration in some areas). Presently, the dominant commercial species include cedro macho (*Carapa guianensis*), comenegro, santa maría, guapinol (*Hymanea courbaril*) and nanciton (*Heironyma alchorneoides*).

A wide range of plant and animal species play important roles in community livelihoods and spiritual well-being. From small diameter wood that's used domestically (for fuel, housing and boats) and products such as tuno (*Castilla tunu*), a type of tree bark used for textiles and artisanal goods, to medicinal plants, wildlife and NTFPs used for food and trade—the forest is a source of food security and local economic development. Moreover, traditional authorities historically derived their legitimacy from their connection to nature spirits; boundaries were customarily defined by traditional forest uses (such as the communal hunt); and local oral history still features strong references to sacred forest sites such as hilltops, burial grounds and hunting camps (Acosta 2004; University of Arizona College of Law 2003).

History of Commercial Forestry

Awas Tingni's forests have long attracted commercial interest because the territory is crisscrossed by a series of rivers, which facilitate timber extraction and transport to existing roads and minimize the need for road construction—generally the costliest part of forestry operations and maintenance.

There is little documentation of logging in Awas Tingni's forests before the Nicaraguan Revolution,

but as in much of the RAAN (and the wider economy during the Somoza period), nearly all profits from forestry activities went to concessionaires and logging companies, with payments made directly to the Nicaraguan state. Awas Tingni community members were only involved in logging operations as laborers, and production focused on mahogany and Spanish cedar with no attention to ensuring forest regeneration or minimizing impact on forest stands, soils, water or wildlife.

Widespread fighting between Sandinista forces and the Contras put a virtual halt to forestry operations through much of the 1980s. But with the peace agreement and a new government in 1990 came the return of concessions. In spite of the autonomy decree and promises to carry out communal land titling, the central government in Managua began to award concessions without local consultation or approval.

The extraction of timber resources in Awas Tingni has been documented since 1990. Table 2 (page 14) presents both legal harvests, as well as estimates of illegal volumes extracted over the same period (which were calculated based on interviews with officials who had local oversight, as well as through a review of control and payment documentation).

The first company to undertake timber extraction on Awas Tingni land after autonomy was MADENSA (Maderas y Derivados de Nicaragua, S.A.), a private firm with Dominican financing and ties to the Sandinista leadership. In 1992, the company began carrying out operations in Awas Tingni under a temporary permit issued by the Nicaraguan Ministry of Natural Resources and the Environment (MARENA). Using local community members as paid labor, MADENSA removed 1,500 m³ and began to develop a management plan for a 43,000-hectare area. When the plan was finished and awaiting MARENA's approval, MADENSA signed an agreement with

Table 2
Legal and estimated illegal
timber harvesting
in Awás Tingni
(1990-2014)

Year	Authorized Volume Harvest (m ³)	Estimated Illegal Volume Extracted (m ³)	Estimated Total Removal (m ³)
1990	0	2,350	2,350.00
1991	0	2,125	2,125.00
1992	1,500.00	505	2,005.00
1993	0	2,600	2,600.00
1994	2,242.92	1,500	3,742.92
1995	4,186.79	2,000	6,186.79
1996	5,233.49	1,300	6,533.49
1997	4,784.91	1,600	6,384.91
1998	4,186.79	1,700	5,886.79
1999	1,794.34	1,400	3,194.34
2000	0	1,415	1,415.00
2001	0	1,180	1,180.00
2002	0	2,500	2,500.00
2003	0	1,900	1,900.00
2004	0	1,650	1,650.00
2005	0	2,000	2,000.00
2006	482.78	1,650	2,132.78
2007	77.75	1,415	1,492.75
2008	859.79	2,000	2,859.79
2009	224.29	2,125	2,349.29
2010	5,002.48	2,350	7,352.48
2011	9,113.42	1,885	10,998.42
2012	928.30	1,770	2,698.30
2013	468.02	1,650	2,118.02
2014	560.45	N/A	560.45
TOTAL	41,646.52	42,570.00	84,216.52

community leaders that promised to follow sustainable forestry principles, employ local community members and pay stumpage fees to the community. Signed in 1993, this agreement was to be valid for 25 years.

With the intervention of WWF and the University of Iowa, however, the community embarked on a process to annul and then renegotiate the agreement so that it would be more favorable. After more than a year of negotiations, a new five-year agreement was reached (Anaya and Crider 1996) under which clearer powers were granted to Awás Tingni with respect to forestry operations, worker rights and benefit-sharing. Critically, all parties agreed to treat the area under management as if it were owned by the community until lands could be demarcated and titled.

Another important development was the establish-

ment of a community cooperative to manage forestry activities. Dubbed the Forest Workers Cooperative (COTRAFOR in Spanish), this group was responsible for overseeing contracts with MADENSA, monitoring the payment of workers and compliance with operational plans, negotiating stumpage fees to the community and managing the use of benefits.

Despite the good faith demonstrated by MADENSA in its negotiations, shortly after MADENSA was to begin operations the Nicaraguan government granted a forestry concession to SOLCARSA (Sol del Caribe, S.A., a firm backed by Korean capital) on other forestlands that were part the community's ancestral tenure. This concession was signed without consulting the community or the regional government, which ultimately led to the court case that was brought before the CIDH.

Operations continued until 2000 under the agreement with MADENSA, and negotiations to renew and possibly extend the five-year contract were begun, but it became impossible to sign a tripartite agreement at the height of the community's battle with the government over land claims. Without an accord, MADENSA chose to stop working in Awas Tingni. Following the 2001 CIDH decision, the community focused on titling its lands—which it did not achieve until 2008—and in the interim, no timber-extraction agreements were reached with outside companies, meaning that there was no approved commercial harvesting from 2000 through 2006. Unauthorized extraction, however, did take place, the result of agreements between *síndicos* and local traders—which fostered the case to establish a local, legal and professional body to oversee forest management and contracts.

Cooperative Organization and Enterprise Development

Over the past 20 years, a central issue in Awas Tingni's forest history has been the establishment of a formal legal body, made up of community representatives, to handle forestry activities and enterprise development. The first attempt to create such a body began in the 1990s with COTRAFOR, but the cooperative was dissolved in 2000 when MADENSA stopped sourcing from Awas Tingni. With the company's exit, the community negotiated no new formal agreements with outside firms until the entry of MAPINIICSA (see box at right). According to interviews, the way that timber harvesting and sales were conducted from 2000 to 2006 engendered conflict.

After Hurricane Felix, a number of allied initiatives across the RAAN focused on establishing new cooperatives or strengthening existing ones. As the negotiations began in 2007, a new cooperative was being formalized involving several community leaders who had been involved in activities during the MADENSA period. Dubbed Yamaba, the new cooperative was founded in 2008 and gained legal recognition in December of that year.

Although the initial intent had been to ensure that each family was represented in the cooperative, Yamaba was made up of 28 members at its founding (all of whom were community members). Over the next two years, a number of groups (including the Rainforest Alliance) provided Yamaba members with training focused on: (1) the legal basis for cooperatives in Nicaragua, (2) organizational and internal management, (3) the potential for value-added forest enterprise in Awas Tingni and (4) the role of cooperatives in wider community development efforts. Visits were also organized with community representatives in Petén, Guatemala—a model for community forestry in the region.

At its founding, one of Yamaba's guiding goals was to attain the working capital and physical assets necessary to increase its role in forest planning and operations, as well as to add value to production activities. The cooperative was supported in preparing a proposal to the United Nations Development Programme



Hurricane Felix

On September 4, 2007, Felix, a Category 5 hurricane, made landfall in the RAAN, just south of the Honduran border, packing winds of over 160 mph. The storm caused more than 130 deaths, destroyed over 20,000 homes and left the region with an estimated \$700 million in damage. More than 1.1 million hectares of forest in the RAAN were affected, with many areas suffering near-total blow-down, felling an estimated 10 million m³ of wood, which was valued at over \$500 million. All of Awas Tingni's forest area was affected, nearly a third of which suffered up to 70 percent blow-down.

In the wake of Felix, Daniel Ortega's government suspended all commercial forestry extraction in the RAAN to focus on reconstruction and avoid an influx of timber traders at a time when it would have been difficult to ensure effective control of salvage activities. The ban was lifted toward the end of 2007, allowing certain corporate-community alliances to engage in salvage operations. Reconstruction needs were the priority, and only value-added products could be exported.

Awas Tingni was one of the few communities in the RAAN with a history of organized forestry, and recognizing both the benefit of salvage operations and the risk of leaving so much downed material in the forest, it sought to form commercial alliances with outside firms to carry out salvage work. The first such alliance was with North American Wood Products (NAWPI), a Gibson Guitars supplier. Because of the lack of working capital and a range of bureaucratic delays and internal problems (see next page), the community was unable to meet NAWPI's order. The wood that was ultimately harvested and processed for NAWPI was of poor quality and was sold on the local market instead. On the heels of this experience, the Nicaraguan firm Maderas Preciosas Indígenas e Industriales de Nicaragua, S.A. (MAPINIICSA) signed a formal agreement with Awas Tingni in 2009. Salvage operations proceeded that same year and intensified until 2011. A major driver of this partnership was the promise to deliver a certified product.

Hurricane Felix
as seen from
the International
Space Station

Photo by
NASA



Controlled Wood Certification in Awas Tingni

In 2010, an FSC Controlled Wood (CW) certificate was issued, covering 52,887 hectares, including the entire area under the MADENSA-elaborated management plan. The group certificate, which was held by a RAAN-based multi-service cooperative called Aikuki Wal, also covered 10,000 hectares in the neighboring community of El Naranjal. The impetus for pursuing certification was MAPINIICSA's demand that the salvage wood harvested in the RAAN be verifiably sourced from a legal operation. At the time, MAPINIICSA had already achieved FSC Chain-of-Custody certification and was interested in CW certification to complement its FSC sources. Achieving CW certification required a great deal of investment and community support, which could have laid the groundwork for progress towards full FSC certification. Ultimately, however, MAPINIICSA's demand was not strong enough to cover the costs of maintaining the CW certificate; the latter was suspended during the 2011 audit and formally terminated in 2012. That same year, a foreign firm tried to take over MAPINIICSA's operations in Nicaragua. Although the deal eventually fell through, uncertainty about the company's business plan conspired with other difficulties to end the commercial relationship with Awas Tingni.

In the spring of 2013, a new company called DUSA, S.A. began negotiating with Awas Tingni to carry out forest harvesting on community land. MADENSA's original management plan was updated, and a specific labor and benefit-sharing agreement was negotiated between DUSA and the community. Despite DUSA's vow to contract the community cooperative, most of the forestry work was ultimately carried out by external parties that the company hired, and the benefits to community stakeholders have been limited. Though DUSA professed its willingness to support sustainable forestry, the partnership has thus far failed to catalyze community enterprise in Awas Tingni.

(UNDP) to obtain financing for operations and salvaged-wood processing. Ultimately, Yamaba received a UNDP grant of \$250,000 to support the purchase of a tractor, chainsaws, motorcycles, office equipment and a fully equipped carpentry workshop.

Following Hurricane Felix, the Nicaraguan government provided Yamaba with a mobile sawmill, as well as permits for harvesting and a secure market for certified wood with MAPINIICSA. When coupled with interest from a supplier to a North American guitar company, the cooperative was clearly poised to embark on forest enterprise development. Despite these conditions, a range of issues conspired to hinder the operation from achieving its potential. Previous UNDP-funded efforts to rebuild 82 houses in Awas Tingni had foundered—only two were built and the remaining funds disappeared—so this time around, UNDP funds had to be directed to reconstruction as a precondition for the disbursement of financing.

Attention to these matters and conflict over priorities led to a lack of follow-through on the harvesting work that was needed to comply with existing purchase orders. A poor-quality product was also late in arriving and negatively affected Yamaba's commercial relations with the guitar-part supplier and MAPINIICSA. These shortcomings gave rise to tensions between the cooperative and community leaders, ultimately resulting in a split between Yamaba and community leaders in charge of forestry. In 2010, even as post-Felix downed wood continued to be salvaged, two different operational plans were approved for separate parcels in Awas Tingni's forests: one run by the *síndico* and the other by Yamaba.

Yamaba Cooperative Structure, Policies and Development

Made up of 28 members, Yamaba is overseen by a general assembly and a board of directors (also known as an administrative council). The board has five members and provides oversight of enterprise activities in concert with a three-member compliance committee. Yamaba is legally recognized, certified by the National Institute for Cooperatives Development (INFOCOOP) and registered in the General Incomes Directorate. Yamaba's accountant is currently its only paid employee, and leadership positions have two-year term limits. Since its founding, Yamaba has completed one cycle and held a second round of elections.

Yamaba's detailed bylaws are to be regularly reviewed and presented to its members. Under the bylaws, the cooperative is also required to present details of its activities, costs and earnings to the community assembly on an annual basis. The regularity of this reporting and the level of detail provided have varied. The bylaws state that the following expenses should be deducted from gross sales earnings:

- a. The cost of advances incurred during operations, both in cash and in kind



ments following timber sales. For example, each member received 1,000 córdobas (about US \$45) in cash in 2011, the year in which Awas Tingni's forests produced its largest harvest volume. In addition to the cash payouts, members also received reimbursements for travel and other expenses incurred as part of doing business (e.g., trips to Puerto Cabezas, etc.).

Livelihoods in the RAAN are tied closely to natural resources

Photo by Eugenio Fernández Vázquez

While investments in community development are a fundamental element in ensuring broad-based support for forestry activities, Yamaba's bylaws lack clarity on the matter. Under the cooperatives law, Yamaba is required to contribute part of its income to community development because it derives benefits from a common property resource, but its bylaws do not prescribe a percentage.

- b. The cost of administering the cooperative
- c. The cost of covering previous losses and/or debts

The balance is to be considered net profit. Of this balance, the following deductions are to be made:

- a. 10 percent for the legal reserve (a fund that covers potential future losses)
- b. 10 percent for internal cooperative education and promotion (a fund for capacity building)
- c. 10 percent for enterprise reinvestment
- d. Two percent for the application authority

A portion of the balance is to be distributed among Yamaba members but the bylaws do not specify how this should be undertaken and offer no fixed policy on dividends. Even though the enterprise has yet to turn a true profit, members have received pay-

ments following timber sales. In practice, whenever sales have been undertaken, a portion of the benefits have indeed gone to community projects, but the amount has been determined on an ad hoc basis, in conjunction with community leaders. In past years, investments have included paying teachers, renovating a local church and providing cash support to the old and infirm, and the costs have been split between Yamaba and other community funds. Yamaba's commitments have averaged 40 percent of the earnings it derived from sales, and payments have been made irrespective of whether or not the enterprise turned a profit.

Since its founding, Yamaba has sought to become a self-sustaining body and has demonstrated the capacity to run its own affairs—from forest planning and operations, to value-added processing, marketing and sales. The cooperative has been supported in the development of investment and business

Asset	Approx. value (USD, including estimated depreciation)	Principal use
Tractor	6,230	Forest harvesting
Sawmill	12,840	Primary processing
Carpentry equipment (table saw, planer, drill press, compressor, etc.)	56,075	Secondary and value-added processing
Misc. operations equipment (hand tools, vice, ladders, generators, etc.)	3,900	Supporting field operations, processing and administrative needs
Office hardware (computer, tables, chairs, files, etc.)	930	Enterprise office administration
Office unit and other buildings	5,550	Building with two offices, warehouse and carpentry workshop
TOTAL	85,525	

Table 3
Yamaba assets (2014)

Table 4
Rainforest Alliance
technical training
(2008-2014)

Technical assistance area	Detail	No. of events	No. trained
Forest management and operations	<ul style="list-style-type: none"> • Basic concepts in forest management • Forest inventory and operations planning • Reduced impact logging techniques • Forest harvesting permitting procedures 	13	222
Primary and secondary processing	<ul style="list-style-type: none"> • Best practices in chainsaw primary processing • Quality control for sawmill operations • Registration and monitoring of primary and secondary processing yields • Cost control and monitoring 	9	123
Certification	<ul style="list-style-type: none"> • Basic concepts in sustainable forestry and certification • Group certification options • Chain-of-custody certification 	10	104
Enterprise organization	<ul style="list-style-type: none"> • Legal foundation and obligations of forest cooperatives • Basic concepts in cooperativism • Forest enterprise organization and functions • Strategic and operational planning • Leadership and coordination with internal and external actors 	15	290
Business administration	<ul style="list-style-type: none"> • Basic concepts in enterprise administration • Financial management and accounting • Personnel contracting and management • Cost controls and price structuring • Contracts • Retention and management of third-party services 	12	184
Markets and finance	<ul style="list-style-type: none"> • Finance mechanisms for community forestry operations • Regulatory requirements for timber marketing • Negotiating and managing buyer contracts 	12	266
TOTAL		71	1,189

plans, and houses the infrastructure necessary to function as an enterprise. The cooperative's current assets are shown in Table 3. (Most assets were acquired as a result of the 2009 UNDP grant.)

Technical assistance and training have been tied to these investments and are a core piece of the support Yamaba has received since its founding. Three agencies in particular—UNDP, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Rainforest Alliance—have worked together on capacity building, although optimal coordination has at times been hindered by each organization's differing objectives.

Rainforest Alliance Technical Assistance

In 2006, the Rainforest Alliance began offering assistance to community forestry operations and SMEs in Nicaragua, with a particular focus on the RAAN. Work with the Awas Tingni community began in late 2007, shortly after Hurricane Felix. Over a period of nearly seven years, the Rainforest Alliance's technical assistance has focused on the following areas:

- Best practices in forest harvesting

- Primary processing
- Secondary processing for value-added production
- Certification
- Enterprise organization and management
- Business administration skills

During the four-year period analyzed in this study, 71 formal workshops and training events were held, which drew a total of 1,189 participants. (This includes double counting, as many people attended multiple trainings.) Approximately one third were women. Members of the Awas Tingni community who were not Yamaba members were also invited to participate in technical assistance events.

Initially, the Rainforest Alliance's support was heavily focused on forest work, certification and market linkages. Much of the support—particularly after Felix and before the launch of the IDB/MIF project in 2010—was driven by the community-company alliances described earlier and the need to focus on harvesting, processing and sales.

With the start of the IDB/MIF project, the focus shifted to strengthening Yamaba's internal capacities and processes while still supporting market linkages. This included training Yamaba members in the application and analysis of an "autodiagnostic" tool. Applied in the majority of the Latin American community operations supported by the Rainforest Alliance, the tool helps to track enterprise development in the following key areas:

- Legal compliance
- Participation
- Administrative capacities
- Financial management and accounting
- Value-added production and marketing
- Credit
- Finance
- Solvency

By evaluating their development according to a range of indicators and using a four-point scale to score performance against defined benchmarks, enterprises obtain a detailed qualitative and quantitative picture of their current operations. The tool indicates areas where improvement is necessary, which helps with prioritizing internal efforts and

external support. Once trained in the application of the autodiagnostic, enterprises can use the tool themselves to track their progress over time.

Assessment of Results

Partly as the result of technical assistance, there have been several important changes in key indicators.

Several factors complicate a standard "before-and-after" analysis of the data in Table 5. First is the post-Felix context in which Yamaba was operating. The same harvest coupe was entered during all four years of operations; harvest permits were determined more by community capacity and demand than by sustainable management precepts. As the extent of downed material and industry demand became clear, the government issued two different harvest permits, both covering a two-year period. Because these were salvage operations, harvesting costs were considerably lower than they would've been during a normal year, and the species and volumes that could be harvested faced fewer restrictions.

Another major factor is the changing nature of forestry operations in the community. When Yamaba began operations, it sought a wide range of buyers

Indicator	Year						Notes
	2009	2010	2011	2012	2013	2014	
Harvest area (ha)	850	850	850	850	-	-	2009-12: Same harvest compartment, salvage operations; 2013-14: DUSA operation with <i>sindico</i> , Yamaba contracted for processing
Allowable cut (m ³)	3,660	3,660	8,714	8,714	-	-	2010 and 2012 harvests were renewals of previous year's annual plans; 2013-14: DUSA operation with <i>sindico</i> , Yamaba contracted for processing
Harvested volume (m ³)	142	-	3,990	-	-	-	2010 volume forwarded to 2011 operational plan; 2012-14: no harvesting by Yamaba
Spp. harvested	Cedro macho Granadillo Mahogany	N/A	Cedro macho	N/A	N/A	Cedro macho Santa maría Cortez Guapinol	2009: CITES-listed spp. legally harvested as salvage; 2014: DUSA order for diversity of lower-grade species
Products sold	Rough-cut blocks	N/A	N/A	Semi-processed blocks	N/A	Semi-processed blocks	2011 harvest processed in 2012; 2014 operations via service contract with <i>sindico</i>
Processing yield (%)	42	N/A	44	48	N/A	54	2014 operations via service contract with <i>sindico</i>
Jobs generated	90	-	43	-	26	65	Jobs include forestry operations and processing; 2013: reforestation jobs generated
Sale price (US \$/bf)	0.46	N/A	1.0	N/A	N/A	0.30	

Table 5
Changes in key indicators
(2009 - 2014)

Improvements were realized through technical training in wood processing

Photo by Sergio Sanchez



and worked to undertake activities all along the value chain—from inventory and harvesting to processing. But when Yamaba finalized its contract with MAPINIICSA, the company took over a large share of forestry operations, assuming most of the costs and paying the community and Yamaba a fixed price (per cubic meter) for logs delivered to first landing. With the arrival of DUSA, Yamaba's role was further reduced to "service provider," processing wood harvested by the company through a contract negotiated with Awas Tingni's communal authorities. Given the highly variable roles that Yamaba played, it is difficult to analyze changes over time.

These caveats notwithstanding, the Rainforest Alliance's support brought about significant change in two areas. The first was in processing yields, which have improved over time, from 42 percent to 54 percent. Rainforest Alliance training in milling techniques for primary and secondary transformation have made this a priority, reducing waste during and after felling and bucking operations, as well as ensuring quality and safety during milling operations in the forest and the mill. With greater capitalization, reinvestment, increased technical capacity and more diversified markets, Yamaba could achieve even better yields as it deploys new technologies for transport and primary processing.

The second area with notable impacts was sale price. In several trainings, the Rainforest Alliance focused on the enterprise's capacity to negotiate with buyers to win a better price. The negotiation process for 2012 sales was aided by the promise of a value-added product (from rough-cut to semi-processed blocks) and delivery to Managua, which resulted in a unit sale price of US \$1 per board foot, more than double than what Yamaba had earned before. Although transport costs were significant, this price resulted in higher income for the cooperative. However, the trend did not continue in 2013 when the community sold its roundwood at first landing, with no processing done by Yamaba. Despite Yamaba's involvement, the price paid per board foot in 2014 dropped significantly, to US \$0.30, reflecting the lack of aggressive negotiating with MAPINIICSA and the fact that the point of sale was within the community.

It is also worth noting two other areas of significant change (even though the Rainforest Alliance had little to do with them). The first relates to production volumes, which in 2010 (when Yamaba reached agreement with MAPINIICSA) peaked to such an extent that the previous year's quota was brought forward and added to the 2010 permit. (The bureaucratic tangle that required such a step later caused a substantial slowdown in the permitting process.) Since 2012, however, Yamaba has not been actively engaged in harvesting. This reflects the split between the community and Yamaba that began in 2010 and reached a new level of disarticulation when DUSA entered the picture. The newest agreement with DUSA, reached via the *síndico*, has Yamaba providing labor and processing harvested wood.

The second area of change relates to species mix. In 2009, a greater mix was sold to Cámara de Artesanos y Muebleros de Nicaragua (CAMANIC), a collective of small furniture makers in Masaya, than when the buyer was MAPINIICSA (a large firm). CAMANIC's assorted producers could absorb a more diverse species mix than larger buyers who had different priorities. In 2014, a more significant number of species was harvested, reflecting the diversified markets in which DUSA was already active or planning to penetrate, including China. While a broader species mix is usually good for forest management, the benefits that could be accrued through value-added processing were largely foregone because a majority of sales involved roundwood.

The continual application of the Rainforest Alliance's autodiagnostic also revealed a troubling trend in Awas Tingni—and with Yamaba in particular. The tool was applied in 2011, after a year of assistance under the IDB/MIF project, as well as in each subsequent year. In 2011, Yamaba scored 35 percent. Legal compliance, administrative capacities, production, value-added processing and access to credit were identified as core areas for improvement. The results of this analysis guided the Rainforest Alliance's subsequent technical assistance. When the tool was reapplied the next two years, it showed notable gains in legal compliance, participation and administrative capacity, with Yamaba's score jumping to 44 percent in 2013.

When the tool was reapplied in June 2014, however, the overall score plummeted to 11 percent, with significant drops in all eight areas of focus. These setbacks were the result of several dynamics. First and foremost, Yamaba's decreased involvement in forest management, harvesting and sales discouraged members from investing time and energy in developing the cooperative. Second, territorial and RAN-level elections further complicated relations within the cooperative and between Yamaba and communal authorities, leading to decreased participation and failure to comply with several requirements in the cooperative's bylaws, including the renewal of its legal registration, leadership rotation and reporting to the community assembly. Finally, conflictive negotiations with DUSA marginalized Yamaba and resulted in further erosion of interest in enterprise development.



Forest resources and services are critical to the future of Awas Tingni

Photo by Eugenio Fernández Vázquez

Lessons Learned

This section examines the development of community forestry in Awas Tingni and reflects on lessons learned from several years of technical assistance, leading to various recommendations (see page 24).

Tenure versus Agency

One of the cornerstones of community forestry is that clear and enforceable tenure rights are a precondition for the successful development of locally driven forestry enterprises. As this study makes clear, the community of Awas Tingni invested heavily in staking its claim to ancestral lands and securing permanent title to them. From its battle in the Nicaraguan courts and the CIDH decision, to the passage of land-titling legislation and the formal recognition of community lands, the community's work to establish tenure rights was very important and arguably set in motion the process of indigenous land titling that is sweeping the Atlantic Coast.

It is, however, increasingly clear that titling has not slowed deforestation in Awas Tingni. AMASAU leadership estimates that most of the territory is now occupied by colonists. Although spatial analysis was not undertaken for this study, community leaders estimate that Awas Tingni is losing more than 500 hectares of forest annually to conversion by colonists, which raises questions about the future of forestry in the community and undermines the hypothesis that granting tenure rights will necessarily slow deforestation.

Authors like Hayes (2008) have asserted that in Nicaragua the titling of communal lands to indigenous groups results in much lower levels of conversion and decreases in land sales to mestizos, but this does not appear to be the case in Awas Tingni. More important than tenure alone is a community's political and economic wherewithal to defend its land rights, not to mention state support for this process. These elements are currently lacking in Awas Tingni, where efforts to control invasions are being hampered by internal conflicts and political

rivalries at various levels.

Meanwhile, sustainable management remains a secondary priority, as it has for years. The considerable time and effort invested in winning territorial rights produced a pause in forestry development, which has had lasting impacts. Given the complications with MADENSA, SOLCARSA and government actors during the 1990s, it's understandable that the community opted to cease formal agreements with forestry companies, but even without these agreements or authorized harvesting, timber extraction and sales have continued illegally, under the auspices of the *síndico* and other community leaders.

As is typical of such arrangements, these operations underwent few checks and have reportedly generated limited benefits for the community. Moreover, with the closure of MADENSA's contract in 2000, COTRAFOR (the first community cooperative) was dissolved, and collective enterprise was not attempted again for eight years, until Yamaba's founding. In the interim, a less representative way of doing business became entrenched, and the work of promoting "cooperativism" has faced significant resistance from internal and external interests that benefit from business as usual.

Such evidence indicates that achieving tenure security, while clearly important, will not singlehandedly correct fundamental social and institutional arrangements that hinder transparent community control over natural resources and equitable benefit-sharing. As Larson and Lewis-Mendoza (2012) noted (in reference to the RAAN), despite decentralization and the titling process, external actors often maintain control over natural resources, while communities still lack decision-making authority over their territories. To address this continuing problem, they argue, community leaders must be further empowered to understand their capacity to negotiate. This case study, however, makes clear that other internal capacity-building processes are also needed to ensure that power centers within the community avoid undermining decision-making when it is in the interest of the collective good.

Social Cohesion and Internal Governance Agreements

The most critical issue raised by this analysis of Awas Tingni's forestry activities is a continuing lack of social cohesion. Disarticulation between the community and Yamaba (its commercial arm) has severely hindered progress on numerous fronts. The existence of two competing forest management authorities has become an untenable situation given that Awas Tingni's forests are a common property resource and that both of these entities are required to serve the collective interest. The division impedes the ability to move forward with a single approach to forest management and enterprise development.

It is highly inefficient to have two forestry operations in the same community and creates problems around forest planning, harvest permitting, operational matters, worker issues and benefit-sharing arrangements. Moreover, it complicates community dealings with companies and other external actors, a fact that became abundantly clear as both MAPINIICSA and DUSA manipulated—and then suffered from having to negotiate and renegotiate with—both the *síndico* and Yamaba, leading to confusion and conflict. In the case of MAPINIICSA, the complications played an important role in the company's decision to stop sourcing from Awas Tingni.

Community-owned, Integrated Sustainable Forest Management

Despite the major changes that have taken place in Awas Tingni over the past 20 years and investments from a range of agencies, the MADENSA-drafted forest management plan that was approved in 1992 remains the basis for the community's forestry activities. Although the plan was recently updated by DUSA, is now approved through 2032 and includes the first comprehensive assessment of downed wood volumes across the forest management unit, it still focuses exclusively on timber harvesting for industry sales, with limited reference to community uses, wildlife habitat, NTFP management and conservation.

Particularly notable is the plan's failure to embed itself in wider community land-use dynamics—a result of its first iteration, which predates the titling process, though the updated plan makes no reference to a broader land-use vision or the impacts of management on forest uses. Moreover, the present plan pays little attention to measures that ensure local participation in decision-making, and there is scant mention of employment opportunities for community members. Although it includes estimated income from timber sales, no mechanism is advanced to ensure company compliance, nor does it address benefit-sharing within the community. And the specific agreement between the community and the company has yet to be finalized, even though operations have begun.

The community's clear legal tenure provides an important opportunity to revise or even nullify the

plan, and restart forest planning and management in a way that is truly participatory, driven by local objectives and appropriate to the community's wider land-use dynamics and forest resource needs.

Enterprise Vision and Capacity

Over the past five years, Awas Tingni has made important advances in establishing Yamaba, legally registering the enterprise and building its capacities in value-added processing, business administration and marketing. Clear improvements have been made—most notably with respect to buyer negotiations and the use of value-added processing to generate increased income. However, competition with the *síndico*-run operation has undermined Yamaba's ability to articulate a unified vision, which has resulted in an emphasis on short-term payoffs over long-range planning, reinvestment and development.

In addition to the disarticulation between Yamaba and the *síndico*-run operation, another issue that was often mentioned during interviews was the challenge of undertaking enterprise development when the very concept is at odds with traditional values or indigenous world views (commonly called *cosmovisión* in Spanish). This echoes the sentiments of indigenous stakeholders in various geographies where the Rainforest Alliance has worked. While this argument has sometimes been used to excuse mismanagement and fraud, it is also clear that no traditional institutions approximate Yamaba's stated objectives nor its proposed approach to business administration and development.

To address this issue—which is of particular importance in communities such as Awas Tingni, where the conservation of traditional culture is essential—those involved need to find a way to articulate a vision for enterprise development that is more in line with a traditional indigenous world view. The findings of the case study on Moskibatana in Honduras (the second study produced as part of this series) are particularly relevant.

Markets, Diversification, Value-added Production and Certification

Table 5 (see page 19) demonstrates the difference in species harvested from year to year. While the mix is not indicative of what could be achieved in future years (several are CITES-listed and could only be harvested because these were salvage operations), buyer demand is a key factor. In domestic markets, small buyers can often substitute one species for another and experiment with new products—which makes them more flexible than larger industrial concerns. Larger buyers have tended to be more interested in single species, and their production is typically more homogenized. They are also more likely to have a preference for roundwood because they already have their own processing infrastructure, which limits value-added production opportunities for local producers.



Forestry activities still have the potential to contribute to community livelihoods in Awas Tingni

Photo by Eugenio Fernández Vázquez

This is not to say that larger buyers should be rejected—clearly, there are advantages to such sales agreements, especially when authorized removals are large, and local producers lack the capacity to deliver a quality value-added product. However, there are economic and ecological advantages to working with smaller buyers because they have the interest and ability to absorb a more diverse species mix and often demand a product that is at least semi-processed. To the extent that Yamaba is able to diversify its buyer base, it may be in the community's interest to do so, while still maintaining larger buyers.

Certification can also play a key role. Awas Tingni's experience with CW certification was not a successful one, mainly because commercial relations with MAPINIICSA were complicated by other issues, and the attempt to reduce producer costs and achieve scale for MAPINIICSA's initial demands made the process of addressing and financing certification requirements much more difficult. Still, the progress made on this front could be used as the basis for working toward certification as part of a wider strategy of diversified market-based planning and community-driven forest management.

Reinvestment and Access to Finance

It has been a challenge to comply with the cooperative's reinvestment goals. Although Yamaba earned substantial profits, these gains were used to pay off debts to staff and distribute dividend payments. The rest was invested in social development, as set forth in the Cooperatives Law. In spite of clear provisions in its bylaws, Yamaba hasn't reinvested gains to capitalize the enterprise.

Without such capital, Yamaba is forced to seek advances to undertake its operations on an annual basis. This is a familiar scourge for small and community-run forestry operations, which traps them in a vicious cycle of compromise. Annual planning, permitting, harvesting and processing are all carried out with advances from buyers—typically middlemen—which then undermines the cooperative's bargaining position during price negotiations and can quickly lead to debt.

A focus of the Rainforest Alliance's work in the Latin American region has been to design and launch financing mechanisms aimed specifically at community enterprises. Although these mechanisms are complicated and involve risk, other community-run operations (e.g., FORESCOM's second-tier business in Guatemala's Maya Biosphere Reserve, etc.) have found them to be transformative—when paired with training and technical support—and have become a priority for future assistance.

A House of Cards

All earlier reflections are secondary to the need to re-launch a socially cohesive forest enterprise that is based on a collectively driven forest management plan. Without a strong social and institutional foundation, all of the advances to date—Awasi Tingni's successful land-rights struggle, the considerable investments made in support of forestry initiatives and the positive impacts of technical assistance—add up to a house of cards that is in danger of collapse.

The next generation of Mayangna in Awás Tingni can benefit from sustainable forestry

Photo by
Eugenio Fernández
Vázquez



Recommendations

The following recommendations are made to guide the development of community forestry and enterprise in Awás Tingni:

1. A community-cooperative compact should be reached, articulating a clear arrangement between Yamaba and Awás Tingni's territorial and community leadership, mandating a single forestry operation. The compact should indicate Yamaba's place in the overall community and territorial governance structure, laying out the roles, rights and responsibilities of the *síndico*, the cooperative and other actors when it comes to forest planning, operations, business administration and benefit-sharing. There must be collective agreement—derived from a participatory process involving the widest possible base of community stakeholders—that spells out decision-making authority and transparency measures in each area of forest administration.
 2. Expand Yamaba's membership to make it more representative—ideally including members of each household in the community. This will require a revision of the cooperative's bylaws.
 3. As part of a participatory, locally led land-use planning process, revise Awás Tingni's forest management plan, based on alternatives stipulated in the AMASAU land-titling process. While the existing, updated version of the MADENSA plan can be used as a starting point,
4. Once an updated, community-driven forest management plan and a single forest enterprise are in place, Awás Tingni should move to diversify production of harvested species and value-added products. This should be done by expanding market linkages to a greater range of domestic and international buyers and developing a marketing strategy that is grounded in a long-range vision and investment plan for community enterprise development. Building on the important progress that has already been made in Awás Tingni, the community should once again work towards FSC certification, which will provide new market opportunities while also ensuring compliance with sustainable forestry practices.
 5. Once the cooperative has articulated a clear vision for the development of a unified enterprise, it should begin building capacity and working with external partners to access financing. While Yamaba already has a significant physical infrastructure and assets for value-added production, and could reinvest its profits so that it no longer has to rely on advances, a loan could catalyze a cultural shift towards a more business-oriented model.
 6. The community should continue to cooperate with outside agencies that provide capacity-building assistance. As much as community independence and financial sustainability should guide every step outlined above, it is clear that Awás Tingni will need continued support if it is to undertake such a major reinvention of its forestry activities. It will be essential for external agencies to focus on community priorities and plan work jointly with other organizations to complement project investments. There is a strong need for continuity in technical assistance and for the work to focus on foundational social and organizational issues. While hard targets often guide the planning of indicators for forest management, sales and processing, future technical assistance needs to build in an even stronger focus on supporting socio-organizational processes and capacity building.

the plan's forest-inventory data and allowable harvest volumes should be re-evaluated. Moreover, the resulting document should reflect long-range community objectives for integrated forest management—including biodiversity conservation and traditional values—within the broader context of Awás Tingni's land-use and development goals.

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