

EVALUATING THE RESULTS OF OUR WORK

**Meeting the New Global Demand
For Lesser-Known Species:
Developing Community Forestry Enterprise**
A Case Study of Communities in
The Maya Biosphere Reserve,
(Petén, Guatemala)

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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. www.fomin.org

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

Acronyms

ACOFOP	Petén Forest Community Association
CATIE	Tropical Agricultural Research and Higher Education Center
CFE	Community Forest Enterprise
CONAP	National Protected Areas Council
COPADE	Commerce for Development (Spanish NGO)
FORESCOM	Community forest services enterprise
FSC®	Forest Stewardship Council®
IDB	Inter-American Development Bank
LKS	Lesser-known (tree) species
MIF	Multilateral Investment Fund (member of Inter-American Development Bank Group)
USAID	United States Agency for International Development

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

Meeting the New Global Demand For Lesser-Known Species



Guatemala's Maya Biosphere Reserve (MBR) is the largest protected area in Central America

Photo by Sergio Izquierdo

Expanding markets for lesser-known species (LKS) has long been identified as a key need to increase the competitiveness of community forest enterprise (CFE), especially in the tropics. A production focus on a single or small range of forest species with strong market demand places operations at risk for multiple reasons, from concerns about overharvesting, to enterprise exposure to shock if and when market dynamics change. While the need for diversification has been recognized for decades, only in recent years has there been significant expansion in demand for many LKS that previously had negligible market pull. In Europe, the USA and China, a host of LKS now has robust demand, offering significant opportunities for CFEs to diversify their product offer.

Meeting this demand will not happen overnight, especially for small, locally-run forest enterprises. Even where LKS occur in CFE-managed forests and are part of current management plans and allowable cut volumes, the economic logic inherent in LKS value chains is distinct from more traditional timber markets. By and large, the markets for LKS are niche buyers and product lines. Penetrating these markets requires a high degree of enterprise capacity and competitiveness. Additionally, some value-added production needs to happen at the CFE level for engagement with such markets to be very profitable. Thus CFEs need to develop their businesses at multiple scales if they are to benefit from LKS markets.

The present case study chronicles work undertaken by the Rainforest Alliance under the MIF project to support CFEs in the Maya Biosphere Reserve, Guatemala, working with the second-tier business FORESCOM, to meet demand for LKS from a European buyer. The central finding of this case

study is that LKS markets can significantly benefit CFEs, as long as there is adequate finance for investment and solid enterprise capacity supported by technical assistance. The role of FORESCOM, moreover, has been critical in stewarding the market linkage, leveraging its value-added capacity, and in working with its members to ensure that engagement with LKS markets is a winning proposition for CFEs.

Taking the specific example of the Árbol Verde CFE and its work with FORESCOM, this case study finds that:

- FORESCOM plays a crucial role facilitating access of its CFE members to preferred markets for value-added LKS.
- FORESCOM's evolution from intermediary of timber sales to a professional enterprise with a mar-



Map 1
Location of the Maya Biosphere Reserve, in the Guatemalan department of Petén

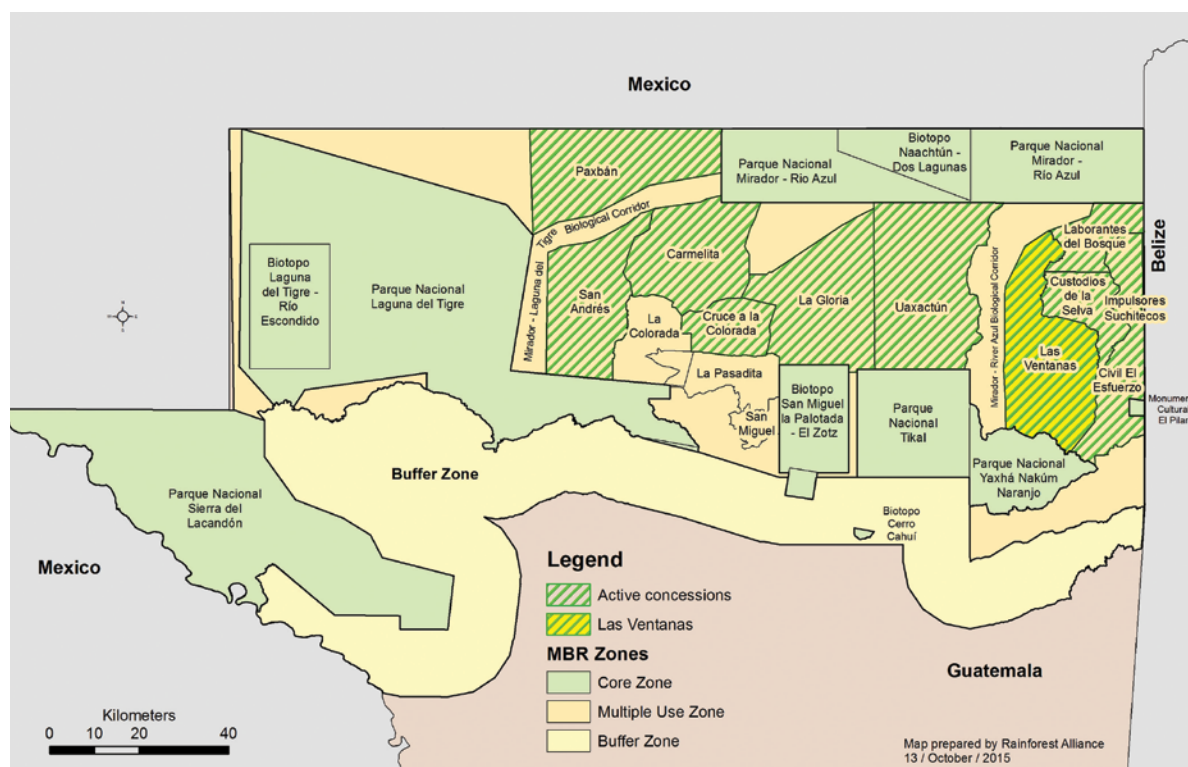
- ket-based logic that stewards new markets for its members has both transformed its own business model while increasing benefits for its members.
- This shift has dramatically improved relations between FORESCOM and its members, and sets the stage for increased access to preferred markets for a range of species and products.
 - Sales of LKS from the Árbol Verde CFE to FORESCOM increased ten-fold during the period of analysis, even as actual harvested volumes of LKS decreased.
 - Through the alliance with FORESCOM and connection to a preferred market for LKS, the average price per board foot of LKS sold as roundwood increased by 20 percent during the period of analysis; sales of value-added material through FORESCOM realized prices of more than double those in 2010.
 - These sales translated into more than US \$120,000 in increased income for the CFE, which posted revenues of more than US \$1 million in 2015, its highest ever annual income; sales of LKS accounted for nearly 30 percent of incremental growth.
 - With improved profits, Árbol Verde has increased average dividends to members by more than 65 percent since 2010.
 - Critically, Árbol Verde has invested 13 percent of its profits over the last three years in a reserve; in 2014, these investments totaled nearly US \$140,000, allowing for financing of both short-term needs (e.g. annual working capital) as well as long-range business development investments.
 - Access to finance has allowed for investment in new machinery and equipment that have helped reduce production costs by nearly 10 percent.
 - Even as Árbol Verde increased its infrastructural capacity and professionalized management, job creation has stayed stable in the community, and worker job security and protection has improved.
 - Underlying these changes in overall performance are fundamental improvements in enterprise governance, administration and business capacity, processes that were supported by Rainforest Alliance.
- Based on these findings, the following recommendations are advanced:
- Technical assistance to second-tier CFE businesses should ensure that such organizations operate with a market logic and facilitate linkages with preferred buyers which result in concrete benefits for CFE members.
 - More aggressive outreach with niche buyers in preferred markets should be facilitated by technical assistance agencies, with an emphasis on testing new LKS for use in select product lines (e.g. flooring, decking, furniture, garden accessories).
 - FORESCOM and its members should study the changes in performance in the Árbol Verde CFE and seek to replicate this in other member CFEs.
 - Árbol Verde should undertake a review of the social benefits generated by these changes in CFE performance, and assess areas for improvement, especially with respect to investment in social development projects.

FORESCOM has developed significant capacity for adding value to its members' wood

*Photo by
Sergio Izquierdo*



Map 2
The Maya Biosphere Reserve (MBR) with the concession managed by the Árbol Verde CFE (Las Ventanas) highlighted in yellow



Introduction

Covering close to 2.1 million hectares, Guatemala's Maya Biosphere Reserve (MBR) is the largest protected area in Central America and home to around 180,000 people, as well as globally important biodiversity and cultural heritage. Established in 1990, the reserve is also the site of an internationally significant example of multiple-use forest management with the twin aims of conservation and social development.

The MBR is divided into three different zones allowing for varying degrees of resource management: (1) the Core Zone (36 percent of the reserve), consisting of national parks and "biotopes," allowing only for scientific research and tourism; (2) the Multiple-Use Zone (40 percent), in which low-impact natural resource management activities are permitted; and (3) the Buffer Zone (24 percent), a 15-kilometer band along the southern border of the MBR, where a range of land management activities, including agriculture, are allowed. The MBR, like all of Guatemala's protected areas, is administered by the National Protected Areas Council (CONAP, by its name in Spanish).

In the Multiple-Use Zone, the Guatemalan government granted usufruct rights to 12 community organizations and two private industrial firms to manage concessions for timber and non-timber forest products. The first concession was granted in 1994. Over the following eight years, 11 more community concessions were approved, as well as two industrial concessions run by private-sector firms. The bulk of these were awarded in the late

1990s and early 2000s. Map 2 and Table 1 show a breakdown of approved forest management units in the MBR, as well as their status.

Since their establishment, the concessions have received considerable external support. In the early years after concession agreements were signed, the focus was on forest management and operations. Over the last 10 years, increasing investments have been made in improving the competitiveness of community enterprises. This is the area where Rainforest Alliance – along with other organizations – has focused its assistance, with support from USAID, the IDB and the MIF, among others.

A key area for development of the MBR's CFEs is the expansion of markets for lesser-known species (LKS). Although the concessions have 33 timber species present in their forests considered to be "commercial" for forest planning purposes, only two of them – big-leaf mahogany (*Swietenia macrophylla*) and Spanish cedar (*Cedrela odorata*) – have historically had much demand in domestic and international markets. Together, harvest of these two species alone accounted for 55 percent of harvested volumes and 85 percent of CFE timber sales incomes in 2013.

A majority of the remaining harvested volume comes from three LKS: manchiche (*Lonchocarpus castilloi*), pucté (*Bucida buceras*), and santa maría (*Calophyllum brasiliense*). Collectively, these three species amounted to nearly 40 percent of the harvested volume in 2013. Some of the key characteristics of these and other important LKS are detailed in Table 2.

Table 1
Community and
industrial
concessions in the
MBR's Multiple-
Use Zone

Community Concessions			
No.	Management Body	Concession name	Area (Ha)
1	A. de P. San Miguel la Palotada*	San Miguel	7,039
2	A. de P. La Pasadita*	La Pasadita	18,817
3	Cooperativa Carmelita, R.L.	Carmelita	53,797
4	S.C. Impulsores Suchitecos	Río Chanchic	12,218
5	S.C. Laborantes del Bosque	Chosquitán	19,390
6	S.C. Organización Manejo y Conservación (OMYC)	Uaxactún	83,558
7	Asociación Forestal Integral San Andrés, Petén (AFISAP)	San Andrés	51,940
8	S.C. Árbol Verde	Las Ventanas	64,973
9	Asociación Forestal Integral La Colorada (AFIC)*	La Colorada	22,067
10	Asociación Forestal Integral Cruce a La Colorada (AFICC)	Cruce a La Colorada	20,469
11	S.C. Custodios de la Selva	La Unión	21,176
12	S.C. El Esfuerzo	Yaloch	25,386
Subtotal – Community concessions			400,830
Industrial Concessions			
1	Baren Comercial Ltda.	La Gloria	66,460
2	Gibor, S.A.	Paxbán	65,755
Subtotal – Community concessions			132,215
Total Forestry Concessions			533,045

A. de P. = Asociación de Producción; S.C. = Sociedad Civil; R.L. = Responsabilidad Limitada
*Concession cancelled

The need to diversify production to include LKS among CFEs has long been recognized. The multiple benefits – from increased productivity and enterprise competitiveness, to the potential for creating improved conditions for mahogany regeneration – form a compelling narrative. Countless consultant reports over the years have lamented the lack of markets for such species. Yet there is a clear mythology about this supposed lack of markets. Year on year, global demand is improving for most of the species listed in the above table. This case study documents the experience of CFEs in the MBR trying to penetrate a European market for a common LKS in forest concessions: santa maria.

FORESCOM and the LKS Market Linkage

An important point of departure for this case study is that the economic logic of harvesting, processing and selling LKS into international markets is different for CFEs than for precious woods like mahogany and Spanish cedar. For small, community-run enterprises to take full advantage of emerging LKS markets they must be

able to deliver high-quality, value-added products at a relatively low cost. It is a very different business than selling highly sought after mahogany as roundwood among buyers competing for some of the most expensive timber on the planet. For the LKS business to make sense for CFEs, they need to improve the productivity and efficiency of forest operations, invest in value-added infrastructure, and professionalize enterprise management to comply with the demands of fast-paced global markets.

Not all of this is feasible to attempt over the short term with individual CFEs. A common approach is therefore the creation of second-tier organizations that aggregate production from multiple CFEs, enable value-added production, and help communities improve quality control, marketing and administrative processes. This is the logic behind FORESCOM (*La Empresa Comunitaria de Servicios del Bosque, S.A.*), a second-tier business founded in 2003 (www.forescom.com.gt). Now counting eleven CFE members in the MBR (Table 3), FORESCOM's efforts are dedicated to providing its members with processing, trade and

Table 2
Lesser-known
timber species
common to the
MBR

Species	Common Name	Notes
<i>Astronium graveolens</i>	Jobillo	Good workability, attractive grain and color; tends to split; high demand for sawnwood and furniture; potential veneer and high-end furniture (SG: 0.75)
<i>Bucida buceras</i>	Pucté	Drying difficult; low demand but some use for flooring; past use for railroad ties; potential in heavy construction (SG: 0.85)
<i>Calophyllum brasiliense</i>	Santa María	Excellent workability and fair resistance; heartwood tone pink to purple; demand for furniture and mouldings, as well as flooring, paneling and frames (SG 0.60)
<i>Cordia dodecandra</i>	Cericote	Fairly easy to work; current use for furniture and cabinetry; potential to expand use for musical instruments and specialty wood products, as well as veneer (SG: 0.61)
<i>Lonchocarpus castilloi</i>	Manchiche	Sapwood/heartwood contrast notable, highly durable; current use for flooring and some furniture; potential for decking and heavy construction (SG: 0.79)
<i>Lysiloma bahamensis</i>	Tzalam	Good workability, medium durability, nice walnut color; current use for flooring and furniture; potential for posts and beams, moldings and doors (SG: 0.63)
<i>Metopium brownie</i>	Chechén negro	Susceptible to insects and fungi, medium durability; current use for flooring and high-end furniture; potential use in artisanal products and sapwood for furniture (SG: 0.74)
<i>Piscidia communis</i>	Jabín	Highly durable and resistant; current use mainly for posts; potential for flooring and tool handles (SG: 0.74)
<i>Platymiscium yucatanum</i>	Granadillo	Attractive color, good workability, highly durable; current use for furniture and flooring; potential for veneer and musical instruments (SG: 0.58)
<i>Platymiscium dimorphandrum</i>	Hormigo	Good workability, very durable with good decay resistance; heartwood variable from orange to red to purple; used for furniture, cabinetry, veneer (SG: 0.81)
<i>Sickingia salvadorensis</i>	Chakte kok	Bright red color; high price due to low milling yields; currently used for flooring; potential uses for furniture and moldings (SG: 0.52)
<i>Swartzia cubensis</i>	Catlox	Black-violet heartwood makes it a substitute for ebony, but low yield and workability; current use for flooring; potential use in high-end furniture and parquet (SG: 0.86)
<i>Vatairea lundellii</i>	Danto	Moderate workability, coarse texture; heartwood yellow/greenish, spiral grain can be attractive; used primarily for flooring (SG: 0.61)

*SG = Specific gravity – averaged oven-dry weight to green volume

Sources: Forster et al. (1998), ITTO (2012), WWF/GFTN (2013), Rainforest Alliance (2014)

Table 3
FORESCOM
membership

Name	Abbreviation
Asociación Forestal Integral Cruce a la Colorada	AFICC
Asociación Forestal Integral La Colorada	AFIC
Asociación Forestal Integral San Andrés, Petén	AFISAP
Cooperativa CARMELITA R.L.	CARMELITA
Asociación de Productores Agroforestales de San Miguel	APROSAM
Sociedad Civil Laborantes del Bosque	SCLB
Sociedad Civil Organización, Manejo y Conservación / Uaxactun	OMYC
Sociedad Civil Árbol Verde	ARBOL VERDE
Sociedad Civil Custodios de la Selva	CUSTOSEL
Cooperativa Unión Maya Itzá R.L.	UMI
Cooperativa Técnica Agropecuaria R.L.	TECNICA

marketing services, and helping to increase the variety of species and products they sell.

With support from donors and the Guatemalan government, as well as a line of credit from the Holland-based Oikocredit (www.oikocredit.coop), FORESCOM has acquired significant infrastructural assets since its founding. This includes milling equipment, molding planes and drying kilns, as well as roading and maintenance machinery. FORESCOM also acts as the group certificate holder for the FSC certification of seven of its members, as well as holding its own chain-of-custody certificate for processing and sale of certified material.

FORESCOM provides a range of services to its members in forest operations, wood processing and finished product marketing. CFEs harvest their wood and process it in small saw mills where the logs are cut into boards or pre-dimensional timber. From here, the wood is brought to

FORESCOM's facilities for further processing such as kiln drying and molding. In the end, the wood is sold as lumber, decking, garden furniture and other finished products. Technical training by the Rainforest Alliance, CATIE and other technical assistance bodies has built up FORESCOM's administrative and technical capacity since its founding (see Rosales 2010 for a previous study on support to FORESCOM). More recently, assistance has focused on professionalizing FORESCOM's management and transforming its approach to working with its members.

Such support has helped realize dramatic change. Since 2010, FORESCOM has expanded its business considerably. Wood processing nearly tripled during 2010-2014, going from 260,000 board feet to 750,000 board feet, now representing some 37 percent of the total volume produced by member CFEs. As the business has expanded, so have revenues. In 2010, FORESCOM reported approximately US \$160,000 in revenue. By 2014, that figure had more than doubled to US \$330,000. Projected revenues for 2015, at the time of this writing, run close to US \$800,000.

This tremendous growth has come about as a result of internal improvements in business administration, final pay-down of an outstanding debt, and also FORESCOM's commercial relationship with its own members. The full story of technical assistance to FORESCOM and resulting changes will not be treated in this case study; they are the subject of a separate analysis of FORESCOM forthcoming. Nevertheless, the latter issue – how FORESCOM works with its members – deserves a brief treatment here.

In the first few years after its founding FORESCOM obligated members to sell a certain amount of



The MBR's concessions are home to an array of wildlife, such as this spider monkey
Photo by Sergio Izquierdo



FORESCOM has developed the capacity to manufacture garden furniture and other finished products

Photo by Sergio Izquierdo

wood to it. However, such transactions were not based on a clear market demand; FORESCOM had yet to develop a market vision or the capacity to meet demand in evolving markets. If there was a return that went to communities, it typically took many months to arrive and didn't pay much of a premium, if any. Over time, FORESCOM developed significant debt, and this created even more pressure, even while the enterprise had yet to develop its own internal capacities to add value and market wood products. As a result of how it had come to operate, many member communities perceived FORESCOM to be little more than another intermediary, merely selling community wood at a markup.

Since 2011, however, the situation has changed dramatically. First, FORESCOM professionalized its management, while still holding true to its core values of service to the community concessions. Leadership roles are now filled by people with professional training in enterprise and marketing, and remuneration is structured and governed in a way that more closely mirrors a private business. Second, FORESCOM now works following a market logic. Far from being simply another intermediary selling community wood, FORESCOM proactively locates new markets, and then leverages that demand to finance operations among its members – up to 50 percent of working capital costs may be advanced. This in turn justifies the logic for its members to sell their wood to FORESCOM. Finally, critically, members are earning considerable price premiums through these new markets, especially for LKS. This is discussed more below.

Key markets for FORESCOM's products are the USA (42 percent of sales), Dominican Republic (27 percent) and Spain (21 percent). Within these markets, the most important species for sales remains mahogany and Spanish cedar, although

markets for LKS are growing, as documented here. FORESCOM dries and sells high-grade sawnwood and value-added material (Select and better) of precious species, including for musical instruments, as well as lower-grade (commons) wood. With LKS, the most important species are manchiche, pucte and santa maria. FORESCOM sells high-grade sawnwood of these species, as well as surfaced boards, flooring, decking, custom moldings, doors and furniture. Through its evolving LKS market linkages documented in this case study, FORESCOM is expanding the LKS grades it works with, increasing the wood volumes from CFEs that reach premium markets.

An important market linkage for FORESCOM is with Spanish buyers that are members of the Madera Justa (Fair Timber) campaign (<http://maderajusta.org>), which is led by the Spanish NGO COPADE (www.copade.es), along with WWF-Spain, Greenpeace and FSC. One of those members is Leroy Merlin (www.leroymerlin.com), a French home-improvement and gardening retailer present in thirteen countries. A member of the Madera Justa campaign since 2008, Leroy Merlin began to actively pursue a specific line of Madera Justa/FSC products in 2012 for its Summer 2013 catalogue. The demand was for a value-added product manufactured in the country of wood origin, with a linkage to socially-responsible enterprise.

The MBR was an obvious potential source point, given the large-scale forest production in community hands and the fact that all wood products harvested in the concessions are FSC certified. With support from the Spanish Agency for International Development Cooperation (AECID), COPADE and the Rainforest Alliance (supported by the MIF and USAID) partnered to make the link to FORESCOM and its member CFEs. After a series



of meetings and analyses to pre-select member CFEs, as well as testing of potential species and products, FORESCOM was identified as the local commercial partner, and santa maría was selected as the target species.

Prototypes were developed and samples analyzed by Leroy Merlin. Ultimately, the company made a purchase order for garden accessories – including planters, deck tiles, paneling, fencing and posts – all made of santa maría. Two lines of decking, in santa maría and pucte, were also ordered. The total order was for US \$250,000, a major sale for FORESCOM. A commercial agreement was signed between FORESCOM and Arte Latino (COPADE's business arm) in late 2012.

The sale represented both a major opportunity and a challenge for FORESCOM and its members. On the one hand, penetration of the European market represented a breakthrough: access to a stable and high-visibility market specifically demanding community wood products, with strong potential to grow over time. At the same time, the demands of this market required that FORESCOM and its members deliver a high-quality, value-added product on time, with little room for delays or errors. This put a great deal of pressure on them to get the sale right in order to hold on to this potentially important client.

As much as capacities and processes within FORESCOM would be essential to meeting the demand, it was also clear that improvements among member CFEs themselves were going to be equally fundamental. Ultimately, FORESCOM's CFE members are the ones that need to deliver wood in a timely, high-quality and reliable fashion. To achieve this, work on the basics of enterprise competitiveness would be necessary. This was the area where Rainforest Alliance focused its technical assistance with support from the MIF.

Rainforest Alliance Technical Assistance for CFE Development

Although community forestry in the MBR has had significant levels of support since the establishment of the concession model over 15 years ago, there are still considerable weaknesses among most CFEs. Many work with outdated or obsolete technology (e.g. sawmills) that limits their productive capacity and requires the sale of much of the wood harvest as roundwood, or result in large volumes of harvested product not even being marketable. As markets for LKS have grown, the capacity to sell harvested volume into those markets needed to be developed.

From a market development perspective, since many CFEs in the MBR lack dedicated professional staff, marketing is normally carried out by CFE managers, who are typically only in charge temporarily and often lack training in enterprise management and marketing. More broadly, most CFEs do not have a clear sense of their real costs and real income from forest production, nor of market prices for wood. They therefore lack the essential information to set prices and negotiate. The general paucity of systematic bookkeeping and administrative control render many CFEs unable to identify problems, streamline operations, and increase profits by either cutting costs or increasing investment.

Improving technical capacities in these and other areas of enterprise administration guided the Rainforest Alliance's approach to assistance under the MIF project. Over a five-year period, 2010-2015, the Rainforest Alliance worked with all nine of the active community concessions in the MBR, focusing on a range of issues identified by the CFEs themselves as fundamental for enterprise growth and competitiveness. The specific themes of technical assistance were:

- Auto-diagnostic baseline setting
- Enterprise improvement plans
- Environmental impact mitigation
- Wood processing yield efficiencies
- Business planning
- Marketing strategy
- Access to finance
- Business administration training
- Enterprise governance and bylaw compliance
- Transparency and internal decision making processes.

During the period of analysis (2010-2014), 111 events (trainings and workshops) were held with the nine CFEs active in the MBR, including 535 participants. A range of technical assistance focused specifically on growing capacities among CFEs for the marketing and delivery of value-added LKS. This included participation in trade shows, the creation of a product catalogue for the North American and European market, and trade missions among potential buyers to MBR concessions. More broadly, trainings focused on business planning and enterprise administration were geared towards CFEs meeting the new demand being mobilized by FORESCOM for LKS.

The remainder of this document analyzes the changes seen within one of the partner CFEs that is providing FORESCOM with material to meet the demand from Leroy Merlin.

The Árbol Verde Community Forest Enterprise

Árbol Verde is a CFE that manages a 64,973 ha concession in the easternmost quadrant of the

MBR. Árbol Verde is made up of 340 members (237 men and 103 women) from nine different communities located in Flores municipality: Ixlú, El Remate, Macanche, El Zapote, Las Viñas, El Naranjo, El Caoba, El Porvenir and Zocotzal. Like most of the community concessions, the Árbol Verde CFE first came together in response to the establishment of the MBR in 1990, joining forces initially to lobby for forest use rights within the reserve's multiple-use zone. In 1992, the nine communities formed the Pro-Community Concession Committee (*Comité Proconcesiones Comunitarias*). Working with other community-based organizations, as well as a range of donors and technical assistance bodies, forest concessions were ultimately approved by Guatemalan government in the mid-1990s. The *Sociedad Civil para el Desarrollo Árbol Verde* (Árbol Verde hereafter) was founded on 07 February 1998. It was granted its concession – called Las Ventanas – on 24 September 1999.

Árbol Verde is legally registered as a civil society association, based in Ixlú, in the Municipality of Flores. Like the other concessions in the eastern part of the reserve, its members do not live in or even very near the forest concession. They are non-resident managers of a rather distant forest resource, and do not have a forest-based history per se, although some members were active in the timber trade before the MBR was established.

The principal objective of the Árbol Verde CFE is to improve the living conditions of its members and the communities they belong to through the sustainable use of natural resources and environ-



FORESCOM is helping the CFEs of the MBR access new markets for LKS

Photo by Sergio Izquierdo

mental services. Specific objectives include:

- Produce raw material and semi-finished products (primary transformation) according to the sustainability criteria of CONAP and international institutions promoting sound forest management through forest certification.
- Integrate the management of NTFPs such as xate (*Chamaedorea spp.*), chicle (*Manilkara zapota*), Pimienta (*Pimenta dioica*), Bayal (*Desmoncus spp.*) according to local capacity and infrastructure.
- Grow the penetration of LKS in local and international markets.
- Implement a management system that integrates biological, ecological and cultural aspects of protection and production.
- Involve the members of Árbol Verde in activities related to forest management, including training in service delivery and applied research (Stoian and Rodas 2006).

After winning its concession, Árbol Verde worked with a local technical assistance body (Naturaleza para la Vida, NPV) to prepare a forest management plan. Under this plan, 33,079 ha were delineated as production forest, and 31,894 ha were set aside as protection forest. Forest harvesting initiated in 2000. In October 2002, Árbol Verde obtained FSC certification, required to maintain its concession. Over the 14 harvest seasons during the period 2000-2013, Árbol Verde harvested 18,338 m³ of wood, ranging from a low of 590 m³ in 2002 to a high of 2,317 m³ in 2012. Over the years, the number of species it has harvested has decreased, from 19 in 2000 to 5 in 2013. This decrease is largely because many of the species harvested early on in Árbol Verde's forest management history had no market and harvested volumes were never sold (Rainforest Alliance 2014).

Like the other CFEs in the MBR, Árbol Verde is governed by a board of directors that represents the nine communities. The board is comprised of a president, a vice-president, a treasurer, a spokesperson and three more members. It reports to a collective general assembly, which is the highest decision making body and within which all 340 members have voice and a vote. The assembly meets once a year. Major CFE issues are discussed and decided at the level of the Assembly, including the approval of yearly financial and operational plans. As with most CFEs throughout the Americas, members of the board of directors serve for only short periods, typically two years. Although this ensures the participation of a broader group of members in business development, it also hinders continuity and long-range strategic planning and execution.

The day-to-day management of the CFE is handled by an administrator, supported by an administrative officer and an administrative assistant. The administrator supervises four units: forest management, wood processing, administration, as

well as the hotel and restaurant that the association operates.

Significant benefits accrue to members from forestry activities. In an average year, the CFE generates 130 jobs, 110 of which are temporary (forest inventory and harvesting) and 20 of which are fixed, full-time positions. A majority, about 75 percent, of those positions go to CFE members. Furthermore, a percentage of CFE profits are paid out as dividends to each member on a yearly basis. This figure has increased substantially over time. In 2003, members received about US \$130 each in dividends. In 2010, that number had increased to about US \$395. As of 2014, the dividend payment stood at approximately US \$660 per member. On top of this amount, according to its bylaws, the CFE should dedicate 30 percent annually to social development projects. In practice this has happened on an ad hoc basis, when members identify an important need.

Since 2003, Árbol Verde has been a member of FORESCOM. A goal from the outset was to work through FORESCOM to achieve better markets for LKS. The early years of membership in FORESCOM saw little progress. Over the years, however, the relationship with FORESCOM has evolved, as noted above. It has gone from one where the second-tier entity was perceived to be merely an intermediary, and sometimes almost a competitor, to one where FORESCOM is seen as providing value to its members through services like kiln drying and value-added processing, to accessing to premium markets. The partnership with Leroy Merlin profiled here is a case in point.

Given Árbol Verde's role in providing a significant share of wood for the business alliance with Leroy Merlin to function, Rainforest Alliance focused significant efforts on the level of the CFE to ensure that the partnership would flourish. Improving enterprise capacity was determined to be the key area for improvement for the CFE to more effectively deliver a quality product to FORESCOM and ultimately to the market.

Results of Technical Assistance

As with other CFE partners that Rainforest Alliance works with globally, a key approach used in the technical assistance work with Árbol Verde was the ADORE tool. Application of ADORE allows an organization's leadership to conduct internal assessments of their enterprise's level of business development and its performance in different areas, in order to identify weaknesses, plan actions to correct them, and measure improvement over time. Applied in a majority of the Latin American community operations supported by the Rainforest Alliance with MIF support, the tool helps to track enterprise development in the following key areas:

- Legal compliance



The timber harvest creates employment opportunities for many of Árbol Verde's 340 members

Photo by David Dudenhoefer

- Participation
- Administrative capacities
- Tax issues
- Financial management and accounting
- Value-added production and marketing
- Credit
- Finance
- Solvency

By evaluating 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. ADORE indicates areas where improvement is necessary, which helps with prioritizing internal efforts and external support. Once trained in the application of the tool, enterprises can use it to track their own progress over time.

Changes in the Árbol Verde CFE performance per key overall indicators during the period 2012-2014

are shown in Table 4.

As can be seen in Table 4, during the period of analysis, Árbol Verde made significant progress in all areas of CFE performance. With respect to institutional compliance, the CFE improved considerably, specifically related to upgrades in its internal business administration, including financial management capacity and accounting systems. This was achieved with support from Rainforest Alliance. Social governance also improved, through a more proactive effort to involve all members in the General Assembly as part of reporting back on financial performance, a more participatory process engagement for investment planning, and an initiative to ensure that the maximum number of job opportunities generated by the CFE go to community members.

Significantly, in the area of environmental management, the CFE made major strides, and is now nearly 100 percent compliant with all main

Thematic area	Year		Percent Change
	2012	2014	
Institutional compliance	67	93	26
Social governance	65	72	7
Environmental management	71	98	27
Economic performance	65	86	21
Averages	67	87	20

Table 4
ADORE indicator scoring for Árbol Verde, 2012 and 2014

Table 5
Change in markets
for the Árbol
Verde CFE's LKS
during 2012-2014.

Árbol Verde LKS sales	2012	2013	2014
Volume sold (bf)	16,335	111,797	171,456
Sold through FORESCOM (%)	4	26	76
Sold directly by CFE (%)	96	74	24

Government of Guatemala and FSC environmental requirements, including management of areas of high conservation value. Key improvements were also made in worker rights: in an important change from years past, all 130 of the CFE's employees – permanent or temporary – now have an official contract and are informed as to their legal rights under Guatemalan labor codes. Additionally, unlike many CFE operations across the tropics, worker safety in the woods and at the mill is part of the enterprise culture, and is strongly enforced.

Meanwhile, productivity has improved in the CFE. During the period 2011-2014, Árbol Verde nearly tripled the volume of wood harvested, from 763 m³ to 2,111 m³. At the same time, the CFE reduced its production costs by 10 percent. The increased volume harvest was result of variation in timber availability in annual coupes, the CFE acquiring its own skidder for timber extraction, and the improved market conditions for LKS facilitated by FORESCOM. The major reduction in production costs came through the acquisition of the skidder as well as two sawmills, which dramatically improved the CFEs processing efficiencies. Both sawmills were purchased with financing supported by a previous IDB-supported initiative, and support from the MIF under this project was mobilized for technical training in their utilization and maintenance.

With support from Rainforest Alliance, Árbol Verde has significantly increased the amount of LKS going to FORESCOM for premium markets over time. While both the volume and number of LKS species being harvested in Árbol Verde has gone down over time, the percentage of LKS as part of overall sales has increased. (As mentioned, in the past, a great deal of volume extracted was never sold.) This has changed considerably over time.

As shown in Table 5, during 2012-2014, the volume of LKS sold by Árbol Verde increased by more than ten times, even as the volume harvest of LKS decreased. Three dynamics underlie this trend. First, the CFE now trucks roundwood out of the forest rather than processing it in the woods, which led to a range of quality and other issues that rendered much of the volume harvest non-marketable in the past. Second, improvements with processing quality have increased the amount the CFE can sell on to FORESCOM. And finally, FORESCOM now buys "mill-run" LKS from the CFE, since many of the products sold to Leroy Merlin are of a dimension that allows FORESCOM

to work around conventional grading guidelines. This means that about 80 percent of the LKS produced by Árbol Verde can be purchased by FORESCOM, whereas before it was typically only select and better grades.

Beyond the total volumes of LKS sold, there were also significant incremental improvements with respect to prices realized in the market. For roundwood sales, which decreased during the period, the average price increased from US \$0.66 per board foot to US \$0.83 for santa maría, pucte and manchiche. Sawnwood prices for the same species increased from US \$1.12 to US \$1.31 per board foot. On average, this amounted to a 20 percent increase in revenues realized through LKS sales. Moreover, the amount of value-added material sold from Árbol Verde to FORESCOM increased during 2010-2014, with prices for such products ranging between US \$2.00 to US \$2.30 per board foot. The main driver behind these changes was the commercial relationship with FORESCOM and the link to preferred markets. Exports from Árbol Verde to international markets increased by 150 percent.

As is clear from the above, the commercial partnership to market LKS through FORESCOM into a premium market has resulted in increased utilization, value-added and economic benefits accruing at the level of individual CFEs. It is worth underscoring that FORESCOM is not merely acting as another intermediary or seeking to capture the lion's share of premium returns – which can happen in such second-tier arrangements – but rather working with member CFEs, along with Rainforest Alliance and other supporters, to improve enterprise processes and extract more value from each cubic meter of wood they harvest.

As a result of all these changes, overall economic performance of the Árbol Verde CFE improved significantly. In 2010, total revenue in the CFE was US \$612,053. At the end of the 2015 harvest season, as this study was being completed, revenues had increased by more than 160 percent to US \$1,033,916. While the majority of this growth was due to increased overall harvested volume sold, plus better markets for mahogany and cedar, improvements with the LKS segment of the CFE business accounted for about 30 percent of these gains. Thanks to improvements to CFE efficiencies and a reduction in production costs, Árbol Verde increased its profit margins with this revenue. At the end of 2014, the CFE reported profits of US \$415,673, more than 70 percent increase over 2010.

What is done with these profits? Two final improvements bear noting here. In 2014, US \$223,684 was paid as dividends to CFE members, amounting to about US\$660 per member. This was only about US\$260 more than four years previous. Additionally, beyond the dividend payment, between 2013 and 2015, a total of US \$139,474 was invested in a reserve, to be held for working capital needs and future investments. This development marks a major shift away from what has long hindered CFE development in the MBR and beyond: the reliance on advances and failure to reinvest profits in future enterprise development needs. This shift was due in large part to technical assistance focused on setting the foundations for long-range entrepreneurial vision, business development and investment planning, all areas of focus for the Rainforest Alliance's MIF-supported work with Árbol Verde.

Conclusions, Lessons Learned and Recommendations

Based on this analysis, several important conclusions and lessons learned can be advanced. First is that markets for LKS are expanding, above all niche markets. This is good news for the forest, and good news for CFEs. Yet for CFEs to take advantage of these markets, they will need to increase capacities to deliver value-added, high-quality products in a professional manner.

Given scale and capacity issues, an effective way

for CFEs to organize and meet these demands is to participate in second-tier organizations or businesses like FORESCOM. As has been widely documented in several case studies in this series, although such organizations have a strong logic to them, achieving competitiveness and fair commercial relationships with member communities can be a challenge. The history of FORESCOM – its evolution from an intermediary to a service provider and marketing body for its CFE members – holds valuable lessons for similar initiatives across the tropics.

Ultimately, however, even where second-tier businesses like FORESCOM can locate new markets for LKS, fundamental issues of CFE competitiveness must be addressed and improvements made if new markets are to be penetrated and grown. This is where technical assistance is most crucial – combined with access to finance and market pull – to fill gaps and improve capacities in areas like long-range planning, financial management, value-added processing and internal governance. These were the areas of focus of Rainforest Alliance's support with the Árbol Verde CFE, which has helped the enterprise make significant gains and respond to the new market demand for LKS mobilized with FORESCOM.

When preferred markets can be identified and penetrated, significant gains can be realized at the level of the CFE, as long as the CFE has both access to finance to improve the quality and effi-

With FORESCOM's help, Árbol Verde dramatically increased benefits realized through LKS sales

Photo by Sergio Izquierdo





ciency of its operation, and technical assistance to support enterprise administration and development. The case of the Árbol Verde CFE demonstrates this compellingly. The combination of market facilitation and value-added processing by FORESCOM, the CFE's own upgrading of harvesting and processing machinery through access to credit, and the support of Rainforest Alliance and other groups in foundational capacity building in governance, financial management and business planning and administration, has resulted in tangible gains.

While the significant progress made to date merits recognition of success, there are several areas for continued improvement that are recommended here for technical assistance, for FORESCOM and for MBR CFEs:

- Technical assistance to second-tier CFE businesses should ensure that such organizations

operate with a market logic and facilitate linkages with preferred buyers which result in concrete benefits for CFE members.

- More aggressive outreach with niche buyers in preferred markets should be facilitated by technical assistance agencies, with an emphasis on testing new LKS for use in select product lines (e.g. flooring, decking, furniture, garden accessories).
- FORESCOM and its members should study the changes in performance in the Árbol Verde CFE and seek to replicate this in other member CFEs.
- Árbol Verde should undertake a review of the social benefits generated by these changes in CFE performance, and assess areas for improvement, especially with respect to investment in social development projects.

ANNEX I

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ANNEX II

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