EVALUATING THE RESULTS OF OUR WORK

Towards Sustainable Landscapes: Strengthening Forest Management and Promoting Income Diversification In an Indigenous Community

A Case Study of Work with Tres Islas Native Community (Madre de Dios, Peru)

Community Forestry Case Studies No. 8/10
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Acronyms

ACA Amazon Conservation Association
AFIMAD Indigenous Forestry Association of Madre de Dios
AGROBANK Peru’s National Agriculture Bank
AIDER Association for Research and Integral Development
BF Board foot/feet
CFE Community Forest Enterprise
FSC® Forest Stewardship Council®
IBC Commons Institute
IIAP Peruvian Amazon Research Institute
MIF Multilateral Investment Fund (member of Inter-American Development Bank Group)
NTFP Non-timber forest product
RAISG Amazon Network for Georeferenced Social and Environmental Information
RRI Rights and Resources Institute
SMEs Small and medium-sized enterprises
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.
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<thead>
<tr>
<th>No.</th>
<th>Case Study</th>
<th>Location</th>
<th>Key Themes</th>
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| 1   | Awas Tingni community                           | North Atlantic Autonomous Region, Nicaragua   | • Indigenous community forestry  
• Incipient forest enterprise development  
• Social and institutional foundations for community forestry |
| 2   | Moskibatana non-timber forest product (NTFP) enterprise | Moskitia, Honduras                           | • Indigenous community forestry  
• NTFP management and Forest Stewardship Council® (FSC®) market development  
• Development of a new forest enterprise |
| 3   | Ejido El Largo                                  | Chihuahua, Mexico                            | • Integrated forestry development planning  
• Community forest enterprise competitiveness |
| 4   | CAIFUL agroforestry cooperative                 | Rio Plátano Biosphere Reserve, Honduras      | • Local forest enterprise development  
• Benefits of forest enterprise at the community scale |
| 5   | Analysis of forest management in community concessions | Maya Biosphere Reserve, Guatemala            | • 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                          | • NTFP enterprise development  
• Financial and administrative capacity building |
| 7   | TIP Muebles                                     | Oaxaca, Mexico                               | • Commercial cooperation among community forest enterprises  
• Furniture value chain development |
| 8   | Tres Islas native community                    | Madre de Dios, Peru                          | • Indigenous community forestry  
• Landscape approach  
• Incipient forest enterprise development |
| 9   | Building markets for lesser-known species       | Maya Biosphere Reserve, Guatemala            | • 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                                     | • Design, operation and impacts of mechanisms to increase forestry producer access to credit |
EXECUTIVE SUMMARY

Towards Sustainable Landscapes: Strengthening Forest Management and Promoting Income Diversification in an Indigenous Community

The last two decades have seen a marked shift towards decentralized forest management in developing countries. Upwards of 30% of forests in the tropics is now under some form of local control (RRI 2014). Most of this area is located in Latin America, where rights devolution in countries like Brazil, Guatemala, Honduras, Mexico, Nicaragua and Peru has been happening for decades. But the trend is increasingly taking hold in parts of Africa and Asia as well. Lessons from the experiences of community-managed forests in the Americas are therefore of critical importance.

Those experiences are decidedly mixed. Mounting evidence shows that community forests can perform as least as well as strict protected areas in conserving forest (Porter Bolland et al. 2012). At the same time, it is clear that managed forests can power economic development via locally driven enterprise (Molnar et al. 2012). Several case studies in this MIF-supported series also demonstrate such potential benefits. Yet it is also increasingly evident that without strong government support and local capacity to defend rights, there may be increased risk for forest conversion (Stevens et al. 2014). As has been widely documented, such conversion often undermines community institutions, livelihood strategies and climate resilience (Sunderlin et al. 2005).

The Peruvian Amazon forms an important case in this regard. Since the 1990s, more than a quarter of the region has been titled to indigenous communities. Forest cover outcomes have been highly variable. In some places, such as the San Martin region, up to half of newly-titled indigenous forests were lost between 2000 and 2010, some of the highest levels of deforestation in the entire Amazon. In other places, forests have stayed relatively intact. Overall forest loss inside indigenous lands was lower than the deforestation rate across the Peruvian Amazon over the last decade, though much higher than in the region’s protected areas (RAISG 2012). While

Building up community enterprise based on the sustainable management of forest resources can help indigenous communities to defend their forests

Photo by David Dudenhoefer
proximity to roads is the factor that appears to have the most influence over deforestation rates, it is also clear that both government support and community capacity to defend their forests is critical.

This case study profiles work undertaken by the Rainforest Alliance together with the indigenous community of Tres Islas, in the Madre de Dios region of southeastern Peru. Like other “native communities” in Peru, Tres Islas has seen considerable deforestation since its title was issued, above all due to mining. Based on the community’s desire to defend its territorial rights, halt deforestation on its lands, and harness its considerable natural resource base to improve community well-being, the Rainforest Alliance engaged in a three-year process with Tres Islas to improve resource governance and community forest enterprise.

The core finding of this case study is that integrated, participatory landscape-scale planning and forest management within titled indigenous lands forms the fundamental building block for defending forest rights, strengthening local governance and generating increased economic benefits. Using a landscape-based approach to territorial zoning, and focusing on community institution building as well as market-based sustainable forestry, significant improvements have been achieved in governance, resource management and livelihoods.

Specific results of this assistance to date include:

• Participatory mapping of Tres Islas’ territorial land use plan, resulting in significant changes to forest zoning, including the expansion of the area for productive management by more than 6,500 ha, and gazetting of 7,700 ha as high conservation value forest.

• Elaboration and approval of an integrated forest management plan for Tres Islas covering 20,439 ha, based on forest inventory and participatory decision-making processes.

• Improved control over the timber value chain and marketing, resulting in a nearly 480% increase in per board foot income for wood harvested in Tres Isla’s forest.

• Expansion of the area under Brazil nut harvesting by over 3,300 ha, making it possible for an additional 19 families to participate in NTFP harvesting and sales.

• A more than three-fold increase in the premium that Tres Islas’ Brazil nut producers receive from their buyer, from US $0.16 to US $0.50.

• As a result of the improved premiums paid, the value of Tres Islas Brazil nut sales per unit sold increased by more than 18%.

• Nearly US $140,000 in finance mobilized from 2012 to 2015, including working capital for Brazil nut producers, an NTFP processing center and a sawmill for local value-added timber production.

• Tres Islas community members began harvesting and processing *aguaje* palm fruit and sold a total 150 kg of fruit pulp in 2014, reinvesting those earnings to improve this new enterprise.

• The *aguaje* palm fruit management plans developed under the project were adopted by the Ministry of Agriculture, legitimizing local management practices; a manual for sustainable palm fruit harvesting being disseminated could improve the practices of hundreds of fruit harvesters across the Peruvian Amazon.

• In addition to *aguaje*, three other new value-added products were developed: floor boards for sale into the local market, Brazil nut oil and snacks made from broken and low-quality Brazil nuts.

• Strengthening of local governance bodies through the reactivation of the community’s Brazil nut and timber management sub-committees, as well as clarification of decision-making processes and benefit sharing agreements.

• Improvement of local capacity to manage forest enterprise value chains, especially in the area of participation, accounting and access to finance.

• At least in part due to the achievements made by Tres Islas in these areas, deforestation has slowed significantly over the last three years.

Based on these results, several key lessons learned are summarized here, with relevance for the country’s 1,400 native communities with title:

• Work with indigenous communities must be based on the recognition of their right to self-determination and should strengthen traditional organizations to build CFE management capacity.

• Using integrated, landscape-scale, participatory approaches, it is possible to increase a community’s benefits from sustainable forest management in a relatively short period of time, strengthening incentives for conservation.

• Coordinated effort with a diversity of actors, as well as solid technical fieldwork and documentation, can secure government legitimization of indigenous management practices.

• Value-added forest production is the key to incentivizing sustainable forestry, but achieving this requires long-term support that transcends the typical project cycle.

• Access to credit can be dramatically increased for indigenous community enterprise, but this requires the design of financial packages that
are suited to the capacities and needs of local-scale CFEs.

In order to further build upon achievements made in Tres Islas, the following recommendations are advanced:

• Resolution of the border conflict with a neighboring community and the completion of efforts to formally demarcate Tres Islas’ territory should be prioritized.

• Traditional decision-making processes should be strengthened through greater transparency, participation, access to information and financial reporting.

• While the community has improved forest management and increased the income that it generates, there is a need for further enterprise capacity.

• Efforts to strengthen indigenous identity, especially among the community’s youth, should be supported.

• The work of the committees that oversee forest activities will need to be further strengthened through technical assistance from NGOs and government agencies.

• Ecological and market information on a diversity of other NTFPs occurring in Tres Islas should be compiled and studied to better understand the scope for further diversification.

• Silvicultural approaches to assist with regeneration in areas degraded by illegal logging and mining should be promoted.

• Upgrades to CFE efficiency and quality control in both the Brazil nut and timber operations should be supported.

• The increasingly diversified offer from Tres Islas needs to be met with a comprehensive marketing strategy for the different parts of its CFE; efforts to develop marketing skills should target the community’s youth.

• With a baseline of credit management, access to new lines of credit should be pursued for new value-added production, and experiences shared through AFIMAD to support other native communities in similar efforts.
Introduction

While deforestation in Brazil has been largely brought under control over the past decade, forest conversion in other parts of the Amazon Basin continues at alarming rates. Such deforestation poses a grave threat to forest-dependent communities, especially indigenous groups, who rely on forests for many of their most basic needs. For such communities, not only do forests supply food, shelter, fuel and water, they often provide the only available potential for sustainable, local economic opportunity.

In Peru, as in neighboring countries, a globally important process of indigenous land titling has been unfolding over recent decades, strengthening the legal basis for indigenous groups to defend their forests. As of 2014, more than 1,400 “native communities” held title to 26.3% of the land area of the Amazon Basin of Peru. Yet while titling itself marks an important step forward – and is often the result of years of struggle and legal battles – it is also clear that in many cases the risk of forest conversion may even increase once titles are issued.

An analysis by the Instituto Bien Común (IBC) found that although Peru’s indigenous lands suffer less deforestation than the Peruvian Amazon as a whole, they had double the rate of deforestation as the country’s national parks and protected areas from 2001-2010 (Soria and Rios 2014). Government support is central to ensuring that these forests are conserved. But it is also clear that without the capacity to defend newly-won rights – and without support to build locally-owned enterprises based on sustainable landscape management – there is significant risk that increasing areas of natural forest in indigenous territories will be converted for other uses.

The Rainforest Alliance has been actively working with native communities in the Peruvian Amazon for over a decade. The broad objective of activities has been to strengthen the sustainability and profitability of indigenous forest-based activities, in order to improve local livelihoods and secure the conservation of the natural resources that communities depend upon. This case study examines activities and results of work in one of those communities: Tres Islas, located in the Madre de Dios region, in southeastern Peru.

Tres Islas is one of 31 native communities holding land titles in Madre de Dios, all of which have large, communally-owned forests from which local people extract an array of goods for domestic use or sale. Those communal forests face multiple and varying degrees of threat, mainly driven by outside forces. The population of Madre de Dios has burgeoned in recent decades – growing from less than 5,000 in 1940 to more than 134,000 in 2015. The construction of the Madre de Dios section of the Inter-Oceanic Highway – linking Lima to Brazil – between 2003 and 2011 facilitated an influx of migrants from the Peruvian highlands. Many of those new arrivals
have come to engage in activities such as illegal logging, gold mining, and conversion of forest for agriculture or ranching. One analysis found that 87 percent of Peruvian indigenous lands in parts of Madre de Dios overlap with private concessions like mining and other conflicting land uses (Scullion et al. 2014).

One of the chief drivers of forest loss in Madre de Dios is illegal gold mining. As gold prices skyrocketed over the last decade, thousands of small-scale operations — nearly all illegal and unregulated — moved into the region and deforested large areas along road and river corridors. An analysis by the Carnegie Institution for Science found that during 1999-2012, the geographic extent of gold mining increased by 400%, resulting in deforestation of nearly 50,000 ha (Asner et al. 2013). In addition to destroying forest, such unregulated mining operations typically pose grave threats to human health: Peru’s Environment Ministry reported that mining operations have dumped an estimated 3,000 tons of mercury into Madre de Dios’s waterways since 2000 (Alvarez et al. 2011).

At the same time, illegal logging continues to drive forest degradation and threaten local communities. In a 2012 report called “The Laundering Machine,” the Environmental Investigation Agency chronicled widespread corruption in the Peruvian forest sector, presenting evidence that up to 90% of the mahogany exported from the country was of illegal origin. As one of the three key timber-producing regions in the Amazon, Madre de Dios figured prominently in the report (Urrunaga et al. 2012).

Although most widespread in untitled areas, such illegal mining and logging takes place in titled indigenous territories as well, bringing forest loss, pollution and social ills to already marginalized rural communities. While activities like mining and logging can have a legitimate place in the long-range development plan of communities, in most cases such activities are presently unregulated and unsustainable.

Recognizing these threats, as well as the key opportunity represented by indigenous land titling, the Rainforest Alliance has been working in Madre de Dios with a range of partners to strengthen landscape-scale resource use planning, with a specific focus on forest management and enterprise. This work has included assisting native communities to increase the sustainability and profitability of forest enterprise while ensuring that they benefit the greatest possible number of community members, including women and youth. Support has come primarily from USAID and the present MIF project. The present case study documents work in Tres Islas during the period 2012-2015.
Context

Tres Islas was founded in the 1940s by 41 families from two ethnic groups: Ese’ Eja and Shipibo. While the Ese’ Eja are one of the ancestral peoples indigenous to the lower Madre de Dios region, the Shipibo are descendants of people who moved into the Madre de Dios region from Peru’s Central Amazon region in the late 1800s, during the rubber boom.

Tres Islas achieved official recognition as a “native community” in 1992. In June of 1994, the community received title to 31,423 hectares of land, most of which was covered with closed canopy rainforest.

Though it lies relatively close to the regional capital of Puerto Maldonado, Tres Islas remained fairly isolated for decades. (To reach Puerto Maldonado in a dugout canoe, even with a motor, takes several hours). The completion of an 18-kilometer road connecting Puerto Maldonado with Tres Islas in 1975 brought more development and opportunities for community members. Tres Islas now has its own water system, a primary school and health center. Most homes – though not all – are connected to the electrical grid, and the area is covered by cell phone service and a collective taxi service.

However, with the completion of the Inter-Oceanic Highway, the same road facilitated an influx of outsiders, resulting in growing pressure on the community’s natural resources. This has been complicated by problems with Tres Islas’ demarcation, zoning and use of its territory. There is also a long-standing border conflict with the adjacent native community of San Jacinto, though the recent signing of an agreement by leaders of both communities opens the door for resolution of that issue.

Tres Islas is home to 103 families. According to data from its community health center, it had 1,391 residents in 2011, more than a third of them children. Tres Islas also has approximately 700 temporary residents, known locally as ‘moradores,’ who aren’t considered community members by its governing board. There is also a group of 42 Shipibos who arrived in Tres Islas from Peru’s Ucayali Region in 2008 with hopes of joining the community, but who have to date neither been registered as community members nor assigned land to farm. There is ongoing tension between Ese’ Eja families in Tres Islas and this group of Shipibo.

Livelihoods in Tres Islas: Understanding the Needs for Technical Assistance

Community members have traditionally relied on farming, non-timber forest product (NTFP) harvesting and logging for income, although mining has become an important source of income in recent years. Families farm plots of land assigned by community authorities where they produce rice, corn, cassava, plantain, banana, citrus, avocado and other crops, primarily for consumption but also for sale. Hunting and fishing are important sources of protein, though local people are less reliant on this than in the past due above all to increased cash flow in the local economy and the ability to purchase meat or fish in Puerto Maldonado.

Table 1

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Number of Individuals</th>
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<tbody>
<tr>
<td>0 - 11</td>
<td>350</td>
</tr>
<tr>
<td>12 - 17</td>
<td>146</td>
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<td>18 - 29</td>
<td>310</td>
</tr>
<tr>
<td>30 - 59</td>
<td>524</td>
</tr>
<tr>
<td>60 +</td>
<td>61</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,391</strong></td>
</tr>
</tbody>
</table>

Source: Tres Islas Health Post, 2012
Harvesting Brazil nut – the fruit-fall of the giant Bertholletia excelsa trees that abound in the region’s forests – has long been an important source of income. Each year from January to April, Tres Islas residents work in the forest gathering the cannonball-sized fruit pods (cocos) that lie scattered on the forest floor. Harvesters crack cocos open with machetes, extract the approximately 10-25 nuts inside, then pack and transport large sacks of nuts out of the woods. Brazil nut represents an important income source for a majority of families in Tres Islas. Furthermore, this NTFP represents a powerful incentive to conserve natural communal forest, since unlike other nuts, Brazil nut can’t be grown on plantations – the trees can only survive in a closed-canopy rainforest. Increasing the benefits of Brazil nut harvesting to community members was an important area of support of Rainforest Alliance technical assistance, as discussed below.

In addition to Brazil nut, another group of NTFPs is also important. Community members have traditionally harvested the fruit of two palms – aguaje (Mauritia flexuosa) and unguarahui (Oenocarpus bataua) – for home consumption and local sale. The fruits of these palms, which grow along lakes and in swamps, are edible. Additionally, oil extracted from unguarahui seeds can be used in skin or hair care products. The assembly decided that the community should promote a more orderly management of palm. The Rainforest Alliance thus made it a priority to legitimize indigenous practices through technical manual elaboration and government approval of palm harvesting.

Timber is another important forest product in Tres Islas, although logging and timber trade has traditionally involved a smaller number of community members than NTFP harvesting. When Rainforest Alliance began working in the community, Tres Islas had a “simplified” forest management plan permitting the extraction of a maximum of 650 m³ from the communal forest per year. In practice, there was no long- or medium-range management planning; annual operations consisted of little more than identifying merchantable volumes in the woods, tree felling, extraction and sale as roundwood. There was no community-wide control over the practice, and only a small number of community members benefitted. According to internal regulations, 5% of the value of wood sales was supposed go to the community at large, but there had been limited compliance with this rule.

In other words, although the forest was a communal resource, timber harvesting and sale had in practice been parceled out, with individual community elites or groups controlling operations in annual coupes, and contracting outsiders. These groups were capturing nearly all of the economic benefits, although their profits were meager in comparison to the market price for wood. The vision of achieving a collective community forest
An enterprise (CFE) to build value-added processing and reinvest in forest management in Tres Islas thus guided a significant part of Rainforest Alliance’s assistance.

While illegal logging poses a threat, mining has become both a source of major income and acute problems for the community. Migrant miners and settlers have moved into Tres Islas in increasing numbers over the last decade. Regional authorities have granted concessions to third parties on Tres Islas’ land and riverfront, and this has resulted in conflicts between the community and miners. Presently, mining operations occupy over 450 ha of land in the community. While community leaders have authorized six mining operations, which pay a fixed-rate tax to a communal fund, another two-dozen have established themselves without approval and pay no dividends to the community. The ramshackle camps around these operations, constructed to house workers, have added to the already significant level of soil and water pollution that the mining activities bring. In some of the bigger operations, informal bars have sprung up — some the size of nightclubs. As is common in mining boom areas, there is also prostitution. The incidence of both HIV and Hepatitis B has reportedly spiked, as has trafficking of young girls to serve in the sex trade.

Although many workers are not from the community, local people go to work in the mines as well. It is easy to understand why. An average household that sends men to the mines can make close to US $500 in a good week, which is a small fortune in Tres Islas.

In 2010, the community established a checkpoint on the road into its territory to keep illegal miners out, but the transportation companies that miners use to ferry them and their supplies to and from Puerto Maldonado filed a complaint against Tres Islas’ leaders in the Superior Court of Madre de Dios, which ruled that it was illegal for the community to keep them from entering its territory. In response, Tres Islas appealed to Peru’s highest court to defend its “territorial integrity.” In September 2012, the court came down clearly on the side of the community, not only upholding its right to the lands but also granting it the exclusive right to determine access to local resources. The decision has major legal implications for native communities across the country.

However, to date, local authorities have failed to enforce it. Improving overall land use planning and monitoring capacity, as well as general organizational capacity, has guided Rainforest Alliance’s support to help address the threats posed by mining.

Community Organization: Defining Areas for Foundational Support

Like most of Peru’s native communities, Tres Islas has a democratic form of government allowing community members to vote on all major issues. The maximum authority is the community assembly — consisting of all adult members — which elects a board comprised of a chief, vice-president, treasurer and other officials. Those community leaders, elected for a period of two years, are responsible for implementing policies approved by the assembly. While the assembly makes the major decisions, the board members — primarily the chief — are responsible for governing the community on a daily basis. In Tres Islas, two women have served as chief over the past decade.

The community’s resource management activities are regulated by committees, three of which the Rainforest Alliance has collaborated with extensively, since they oversee forest resources: Brazil nuts, timber and a new palm fruit committee. All three committees work closely with the Indigenous Forestry Association of Madre de Dios (AFIMAD by its name in Spanish), which coordinates the work of comparable committees in four native communities. In the case of Brazil nuts, AFIMAD organized members of the four communities to earn their Organic and Fairtrade certifications. (See Community Forestry Case Study #6 of this series.)

Despite gradual improvements since its title was issued, weak governance hindered the development of sustainable natural resource management and enterprise prior to this intervention. For example, many community members had only a vague understanding of the overall forest resource management plan and the potential benefits of forest enterprise activities. The concentration of power in the chieftainship also limited the effectiveness of committees responsible for forest resource use. Moreover, mechanisms for coordination between related committees, the
board and the community assembly hamstrung the ability to make collaborative decisions in a timely manner. Another area where problems were identified was the participation of women and youth in community government. Although women have held board positions, including the chieftainship, their participation in forest activities remained generally limited. Another problem was the essentially ‘privatized’ extraction of communally-owned natural resources by a minority of community elites working with outsiders. As noted above, outsiders captured the bulk of revenues from logging, as well as authorized mining. Internal actors involved regularly circumvented community regulations established by the assembly for the use of natural resources and benefit sharing.

Based on the above issues, revealed during participatory assessments and baseline diagnostic exercises, Rainforest Alliance personnel worked with Tres Islas’ community leadership to define a plan of action. This plan of action had three main points of intervention: (1) review and revise the community’s land use map and plan, (2) build capacity to improve management of its forest-based economic activities, and (3) develop community forest enterprise activities to increase benefits for local livelihoods.

Rainforest Alliance Technical Assistance

The Rainforest Alliance adopted an integrated, landscape-scale approach in assisting Tres Islas to better manage natural resources and tap the full potential of the community’s forest. From the start, the goal was to increase household incomes without
undermining the forest’s productivity, while building local institutional and enterprise capacity to manage forest-product harvest, processing, sales and benefit sharing more equitably. Activities utilized a participatory approach, based on respect for traditional community organizations and indigenous forest management practices, building local technical capacities in territorial planning and forest enterprise development.

In implementing technical assistance, the Rainforest Alliance built upon the work of, and collaborated with, various other organizations, including AFIMAD, the Amazon Conservation Association (ACA), the Association for Research and Integral Development (AIDER) and the Italian development organization Cesvi.

The starting point for intervention was the Tres Islas community assembly, which as mentioned is the maximum decision making authority in the community. After an initial diagnostic study, Rainforest Alliance personnel engaged the assembly in 2011 with a proposal to provide technical assistance and other support to help the community strengthen the sustainability, efficiency and economic benefits of its timber and Brazil nut harvesting activities, to develop strategies for diversified forest production, and to explore options for adding value to forest products for enterprise development.

The assembly approved the collaboration and signed an agreement with the Rainforest Alliance specifying the areas of work and obligations. During 2012, an initial phase of resource management assessment was undertaken, detailing the issues mentioned in the previous sections.

Following this, in early 2013, Rainforest Alliance elaborated a baseline using its auto-diagnostic tool called ADORE. Application of ADORE produces an internal assessment of an organization’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 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
- 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.

Based on issues identified with the community, as well as the baseline assessment, Rainforest Alliance delivered 44 workshops and other training activities in Tres Islas during the two-year period between 2013 and early 2015. These workshops focused on the following core areas:

- Enterprise governance and bylaw compliance
- Transparency and internal decision making processes
- Forest resource assessment
- Forest management best practices
- Enterprise development
- Markets
- Financial management and credits
- Business administration training
- ADORE tool application and analysis

A Tres Islas community member harvests ungurahui palm fruit (Oenocarpus bataua) Photo by Andrea Ganzenmüller
Results of Technical Assistance

As a result of technical support, Tres Islas’ significantly improved internal capacities. This was confirmed by comparing the scores of an ADORE evaluation undertaken in 2015 with those of the baseline evaluation of 2013. The following table and figure illustrates the improvements in different aspects of the community’s business development.

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

Several key areas of improvement stand out. First, the area where the biggest gains were made was with respect to participation. This was the result of the reactivation of the committees governing forest resource use, improved communication about resource management decision making and implementation within the community, and better coordination between committees and with the general assembly. As noted in other case studies in this series, this foundation for social organization is the fundamental basis for developing sustainable, equitable forest enterprise.

Three other areas stand out in terms of CFE improvement. First were the big gains in administrative capacity and accounting, specifically training of staff in business skills and stronger controls put in place for bookkeeping and reporting. Second was in the area of finance. As discussed below, through improvements to forest planning, social organization and enterprise capacity, Tres Islas was able to significantly expand access to finance for working capital. Finally, overall solvency of the CFE was improved dramatically. This came as a result of the substantial growth in sales of a diversity of forest products.

<table>
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<th>Indicator</th>
<th>Baseline 2013 (%)</th>
<th>2015 Evaluation (%)</th>
<th>Change (%)</th>
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<td><strong>Average</strong></td>
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<td><strong>52</strong></td>
<td><strong>24</strong></td>
</tr>
</tbody>
</table>

Table 2

Results of Tres Islas ADORE assessments of 2013 and 2015

Figure 2

Comparative graphic of ADORE results for Tres Islas in 2013 and 2015.
goals and approaches given the results. Based on these discussions, Rainforest Alliance helped the community draft a new forest management plan, which lays the groundwork for long-range enterprise development.

As part of the new plan, the forest area where timber extraction is permitted was expanded by 6,579 hectares – from 13,860 ha to 20,439 ha. Nevertheless, the community decided to limit the volume of timber that can be extracted in a year to 650 m³, which keeps it within the lowest level of regulated harvest permitted by the regional Forest Authority. This permitting category prohibits the harvest of cedar and mahogany, as well as the use of heavy machinery, thus allowing for an expedited, less bureaucratic procedure to permitting for legal harvest and trade of timber.

Elaboration of this plan was critical for several reasons. In years past, timbering in the community happened on an annual basis, with no basis in a longer-range plan and therefore no control or knowledge about impacts on the forest. Such annual operations were typically under the control of outside parties, who would handle all the paperwork, investment and extraction for operations, benefiting only a few elites in the community. Now, having engaged the process of developing a longer range plan, the community controls its own forest harvesting operation, made possible as well through improvements to social organization and access to finance, discussed below.

Forest Landscape Management

Taking a landscape-based approach that looked at the whole indigenous territory as the point of departure, technical fieldwork to improve management began with participatory mapping of land use in the community’s territory, undertaken in collaboration with the local NGO AIDER. This resulted in the identification of five management zones where different forest resource activities may occur, as well as areas for other uses, and an area for protection.

This mapping exercise was based on participatory and field-based assessments of the productive potential, limitations and biodiversity and cultural values of different forest areas within the community. Based on these analyses, the Rainforest Alliance supported field assessment and demarcation of Tres Islas’ communal forest, as well as an effort to seek resolution of the territorial conflict with the neighboring native community of San Jacinto. The above map shows the resulting land use map produced as part of this process.

Based on this zoning, a forest inventory was undertaken to assess the productive capacity of the forest’s timber and non-timber resources. The inventory was led by Rainforest Alliance foresters, working together with Tres Islas community members who were trained in the field to build local technical capacity. Inventory results were interpreted and shared with community committees, and discussions were held to define alternative forest management
Once the new management plan was approved, Rainforest Alliance personnel worked with members of the timber committee to draft new internal regulations governing forest harvesting and trade, and provided continuous support for their implementation. This was complemented by training activities in reduced-impact logging, as well as application of silvicultural methods to promote improved natural regeneration of desirable species. Community members involved in logging also received training in methods for decreasing waste as part of primary processing. However, a study by AFIMAD found that yields had only been improved by 2% since 2013 (from 41% to 43%). This is thus an area where further capacity building will be needed, as well as equipment upgrades, which is currently the main bottleneck to improved yields.

This shift also created the space to begin planning for value-added processing. With the forest management plan finished and the CFE being strengthened, Tres Islas acquired its own sawmill and began producing floor boards for the local market in 2014. This has created work (albeit part-time) in the community and spread the benefits of forest harvesting beyond the few that benefited in the past. These amount to transformative changes in forest management in Tres Islas.

On the NTFP side, the area of the communal forest where Brazil nuts can be harvested was expanded by 3,348 ha – from 12,544 ha to 15,892 ha. The newly incorporated areas contain an additional 1,540 productive Brazil nut trees, which made it possible for the Brazil nut committee to increase the number of families harvesting the nuts from 30 in 2012 to 49 in 2014. Families involved in the Brazil nut harvest participated in trainings and other efforts required to maintain the community’s organic certification and to achieve Fairtrade certification.

### Forest Harvesting and Sales

With the overall management plan finished, Tres Islas submitted an annual operations plan at the beginning of 2014 to receive a timber-harvesting permit. This plan was approved and allows for harvest of 8 species and a total volume of 647 m³. In addition to the significant improvements noted with respect to transparency and participation in forest planning and management, better enterprise vision, control over the value chain and negotiation with buyers has already resulted in concrete gains.

As of this writing, of the timber harvested from the current year’s sale, the amount the community is receiving for its lower-grade species had increased from about US $0.31/board foot to US $0.56/board foot for rough-cut planks processed by chainsaw in the forest. For the community’s high-value timber (*shihuahuaco, Coumarouna odorata*), sold on the stump, the increase from a base rate of US $0.03/bf to US $1.12/bf was tremendous.

These huge increases in benefits are the result of two factors: increased enterprise control over forest planning and sales and better negotiating with buyers. Profits from these sales have been reinvested...
to purchase sawmill equipment to add further value to timber in the future, leaving a reserve to finance working capital needs for future harvests.

Beyond timber, market conditions for the community’s Brazil nut harvest, processing and sales were improved. This was achieved through negotiation of a better agreement between AFIMAD – which represents the Brazil nut committees of Tres Islas and three other native communities – and the company Candela Peru, which purchases, processes, and markets Brazil nuts. Renewal of the community’s organic certification and the achievement of Fairtrade certification were major incentives for Candela Peru to renegotiate.

The new commercial partnership resulted in a 230% increase in financing provided by Candela Peru to Tres Islas’ Brazil nut committee between 2012 and 2015. The committee distributes such financing among members to help cover the cost of Brazil nut harvesting. As much as the promise of a certified product was an incentive for Candela Peru to increase its annual advance, the company’s management also felt secure in doing so thanks to improvements in the Brazil nut committee’s financial management and accounting.

Nevertheless, Candela Peru’s financing still falls far short of the investment that community members have to make to collect and transport Brazil nuts out of the forest. AFIMAD consequently negotiated a line of credit with the national agriculture bank, AGROBANK, to supplement Candela Peru’s pre-harvest advances. With Rainforest Alliance assistance, AFIMAD negotiated a loan of 50,000 Peruvian soles (the equivalent of approx. US $16,000) from AGROBANCO for disbursement to 23 Brazil nut harvesters in Tres Islas. This was part of a larger line of credit for 142,000 soles (the equivalent of approx. US $47,000) with an annual interest rate of 14% that AFIMAD secured for the four native communities that it represents.

These changes resulted in major improvements in Brazil nut sales figures in Tres Islas. Although total sales volumes went down – due to lagging market demand – the price per unit increased by 18%. In 2012, the community sold 1,384 barricas (approximately 70 kilograms) for a total of PEN 253,242 (approx. US $99,400). This amounted to about US $72 per barrica. By 2014, while production had dropped to 799 barricas, total sales were PEN 196,877 (approx. US $67,890), which means the unit price increased to US $85 per barrica. Moreover, this increase was realized during a period when the market price for Brazil nuts declined.

The new zoning and management plan also includes 346 hectares of aguaje and ungurahui palm forests. According to project analyses, those areas have a productive potential that permits the sustainable harvest of 80 tons of aguaje fruit and 68 tons of ungurahui fruit per year. This implies the possibility of new income for a total of 29 community members who could participate in the sustainable exploitation of palm fruit.

In addition to strengthening the sustainability and profitability of Tres Islas’ timber and Brazil nut harvests, the Rainforest Alliance helped the community move toward diversifying its NTFP management, in order to increase local incomes without overexploiting one resource. One advantage of NTFP diversification is that it holds the potential for increasing participation by women and youth, since logging and – to a lesser degree – Brazil nut harvesting have traditionally been dominated by men. Another potential benefit is the creation of employment for more months of the year, since the Brazil nut and timber harvests are largely limited to the dry season.
Community leaders identified *aguaje* and *ungurahui* palm fruit as the best potential new NTFPs for development. The seasonality of harvesting made these NTFPs particularly attractive for development. Like Brazil nut, palm fruit is harvested mainly in the rainy season (January-March), while timber is harvested in the dry season (May-December). Thus, producers can use their time more efficiently, obtaining year-round income. NTFP harvesting and processing activities also benefit more women in the community.

However, there were no regulatory tools governing palm fruit harvesting in Peru, so Tres Islas was unable to obtain forestry permits for the legal commercial harvest of *aguaje* and *ungurahui*. The Rainforest Alliance thus supported the elaboration of technical guidelines with local authorities and community members, as the basis for developing management plans. The proposal was approved by Peru’s Ministry of Agriculture, and a manual for sustainable palm fruit harvesting was elaborated with Tres Islas community members. The new regulations and manual have the potential to improve the activities of hundreds of palm fruit collectors across the Peruvian Amazon.

Meanwhile, Tres Islas’ community assembly created an *ungurahui* committee, which is responsible for maintaining an internal control system – a requirement for organic certification – and managing harvest, processing and sales. Since the community had no experience in harvesting *aguaje* and *ungurahui* fruit for commercial purposes, the Rainforest Alliance arranged training in best practices for harvesting, storing and processing.

While climatic conditions prevented the harvest of *ungurahui* fruit during the 2013-2014 fruiting season, progress was made on harvesting and extracting the pulp from *aguaje* fruit. The community sold approximately 150 kg of *aguaje* fruit pulp in 2014. Income was reinvested in project activities and maintenance of the processing plant, marking the beginning of a more diversified exploitation of the community’s NTFPs.

Adding further value to forest products is a priority for the community. To this end, Rainforest Alliance supported proposals for funding for infrastructure and equipment. In collaboration with AFIMAD and Candela Peru, the construction of a processing center for removing the pulp from *aguaje* fruit and extracting the oil from *ungurahui* seeds was supported. Rainforest Alliance personnel also helped the community submit a proposal to the Global Environment Facility’s Small Grants Program for a US $5,000 grant for construction of a Brazil nut collection and processing center. They subsequently helped ACA negotiate a grant from the Government of Japan for US $90,512 to complete construction and equip that processing center. Those funds were also used to build and equip a small sawmill for producing floorboards from a portion of the hardwood the community harvests.
Conclusions and Recommendations

The case of Tres Islas provides an important example of the economic benefits that can be achieved through sustainable forestry over a relatively short period of time, working through participatory processes that engage a holistic, landscape-scale approach. As much as territorial planning and management was the key starting point, however, the focus on building local capacities in existing institutions rooted in indigenous governance was equally important. Put another way, the improvements to social organization, enterprise transparency and participation in forestry were fundamental to the changes that have been realized in Tres Islas. The combined achievements realized with the people of Tres Islas in territorial planning, enterprise governance, and economic benefits form the basis for the community to defend its collective title.

While data is insufficient and attribution is difficult, deforestation trends in Tres Islas seem to be slowing. From 2004-2011 deforestation in Tres Islas averaged 161 hectares/year. More recently, during 2012-2014, this rate has dropped to 100 hectares a year. While a drop in gold prices certainly played a role, the steps the community has taken to reinforce territorial planning, strengthen and diversify resource management and build local capacity for enterprise development have helped lay the foundation for better defense of its forests.

Based on these results, several key lessons learned are summarized here, with relevance for the country’s 1,400 native communities with title:

• Work with indigenous communities must be based on the recognition of their right to self-determination and should strengthen traditional organizations to build CFE management capacity.

• Using integrated, landscape-scale, participatory approaches, it is possible to increase a community’s benefits from sustainable forest management in a relatively short period of time, strengthening incentives for conservation.

• Coordinated effort with a diversity of actors, as well as solid technical fieldwork and documentation, can secure government legitimization of indigenous management practices.

• Value-added forest production is the key to incentivizing sustainable forestry, but achieving this requires long-term support that transcends the typical project cycle.

• Access to credit can be dramatically increased for indigenous community enterprise, but this requires the design of financial packages that are suited to the capacities and needs of local-scale CFEs.

Photo by David Dudenhoefer
In order to further build upon achievements made in Tres Islas, the following recommendations are advanced:

- Resolution of the border conflict with a neighboring community and the completion of efforts to formally demarcate Tres Islas’ territory should be prioritized.

- Traditional decision-making processes should be strengthened through greater transparency, participation, access to information and financial reporting.

- While the community has improved forest management and increased the income that it generates, there is a need for further enterprise capacity.

- Efforts to strengthen indigenous identity, especially among the community’s youth, should be supported.

- The work of the committees that oversee forest activities will need to be further strengthened through technical assistance from NGOs and government agencies.

- Ecological and market information on a diversity of other NTFPs occurring in Tres Islas should be compiled and studied to better understand the scope for further diversification.

- Silvicultural approaches to assist with regeneration in areas degraded by illegal logging and mining should be promoted.

- Upgrades to CFE efficiency and quality control in both the Brazil nut and timber operations should be supported.

- The increasingly diversified offer from Tres Islas needs to be met with a comprehensive marketing strategy for the different parts of its CFE; efforts to develop marketing skills should target the community’s youth.

- With a baseline of credit management, access to new lines of credit should be pursued for new value-added production, and experiences shared through AFIMAD to support other native communities in similar efforts.
The community uses broken or low-quality nuts from its processing center for the production of candied Brazil nuts.

Photo by Katy Puga
References


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