



WORLD  
RESOURCES  
INSTITUTE

FOREST LEGALITY  
**ALLIANCE**

**ISSUE BRIEF**

CASE STUDY

# TUNING IN: TRACKING WOOD FROM HONDURAN FORESTS TO U.S. GUITARS

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## **INTRODUCTION**

This series of case studies is intended to show commercial buyers of wood and paper-based products, especially those who trade in species and/or source from places with a perceived risk of illegality, how their supply chains can conform with U.S. legal requirements on importing certain types of wood. The case studies, compiled by the Forest Legality Alliance (FLA), draw lessons from emerging best practices for managing risk in high-risk contexts. They discuss the impacts of the U.S. Lacey Act (see Box 1) and other market demands for legal wood products and identify and highlight potential problem areas as well as pragmatic opportunities for reducing the complexity of compliance.

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The FLA hopes the Lacey Act will encourage best practices in forest supply chains and

provide valuable information about the global flow of forest products, without imposing undue burdens on the private sector.

To that end, the FLA case studies of best practices in private sector procurement describe:

- How the Lacey Act affects operations in countries that supply forest products to U.S. importers;
- How to supply information consistent with the Act's intent, while reducing transaction costs and unintended consequences for producers;
- Best practices along supply chains to streamline the flow of information about forest products; and

- How to scale up these best practices to support the private sector in complying with new legality requirements, consistent with the FLA's goal of increasing the capacity of supply chains to deliver legal wood and paper and to help the private sector respond to emerging forest product legality assurance requirements.

The case studies do not attempt to assess the legality of the supply chains in question. They are not investigations, legality verifications, product tracing, or chain-of-custody analyses. The FLA does not intend to suggest that the resources highlighted in the series are a model for supply chains since supply chains differ vastly in size, location, or product, but they do offer examples and insights that might spur actions by other companies.

## EXECUTIVE SUMMARY

This study focuses on two supply chains for mahogany that originate in remote biodiversity-rich forests in Honduras. These supply chains were selected because they involve small forest community cooperatives that, compared with industrial operations, have a lower capacity to respond to market requirements for legal wood, including the U.S. Lacey Act. The study describes two approaches used to minimize the risk of sourcing illegal wood. The first approach was to establish strong relationships with the suppliers and the second was to prefer certified wood. The main lessons from this study are:

- The Lacey Act requirements had little or no impact on the way the buyers managed risk for these

specific supply chains, because the buyers established supply-chain control systems prior to 2008 to (a) secure a long-term supply of the product, and (b) implement corporate environmental/social responsibility policies.

- Supply-chain control systems, such as barcode tracking and chain-of-custody certification, are useful tools for enhancing assurances of legality. Long-term relationships with suppliers and commitments from buyers have been important for the successful implementation of these approaches, and critical to minimizing the risk of illegal wood.
- Intermediaries and facilitators play a key role in building and strengthening the technical and

administrative capacity of the cooperatives to harvest and process timber.

- The community cooperatives in these supply chains face various challenges: inadequate law enforcement, competing land-use pressures, drug trafficking, and competition with illegal logging. Yet the sustained demand for high-value species such as mahogany provides a powerful incentive to maintain and strengthen forest community operations.
- The supply-chain control approaches highlighted in this study work, in part, because of the high value of the end product, and, because of the financial assistance of external donors that have invested in building

the technical capacity and social development of the community cooperatives. In-depth analysis to understand the financial viability of the operations without such support is needed.

- Although the long-term financial sustainability of the community cooperatives is unclear, the perceived community and biodiversity benefits, along with the buyers' interest in securing a long-term supply of legal wood, are strong incentives for all stakeholders to ensure their continued viability.

This issue brief is based on a review of relevant documents, visits to the field sites and processing facilities, and a series of interviews with stakeholders. A complementary video is available at the FLA website, [www.forestlegality.org](http://www.forestlegality.org).

## CONTEXT AND BACKGROUND

Big-leaf mahogany (*Swietenia macrophylla*) is a tropical hardwood valued for its beauty (color and grain), stability, durability, density, and workability.<sup>1</sup> In a natural setting, mahogany is a slow-growing species that is naturally distributed patchily at low densities from Mexico to Brazil.

It is used in high-end products such as furniture, doors, and musical instruments, including the necks, sides, and backs of guitars. Most of the mahogany traded in global markets is harvested from natural stands. Between 1996 and 2002, the annual export of mahogany from the American tropics exceeded 120,000 cubic meters, with Brazil, Peru, Bolivia, and countries in Central America the major producers. The

major importer of mahogany during this time period was the United States, which captured an estimated 60 percent of the global trade of mahogany (Lemmens 2005).

Mahogany has been linked to illegal harvesting and trade in various countries including Brazil, Peru, Bolivia, and Honduras (Mejia et al. 2008, Greenpeace 2001, AIDSESEP 2007, Fagan and Estremadoyro 2010, EIA 2005). Concerns over the decline of mahogany due to commercial over-exploitation and illicit harvesting and trade led to the listing of the species in Appendix II of the Convention on International Trade in Endangered Species (CITES) in 2003 (CITES 2002, 2003, and 2011). Because of the CITES listing, the harvesting, transportation, and trade of mahogany requires special permits issued by in-country CITES authorities (Box 2).

### BOX 1

## THE U.S. LACEY ACT

The Lacey Act is a 1900 U.S. law that bans trafficking in illegal wildlife. In 2008, it was amended to include plants and plant products such as timber and paper. This legislation is the world's first ban on trade in illegally sourced wood products. The 2008 amendments also included a requirement that wood products importers make a declaration describing their product(s), including the scientific names of all tree species included in the product, the country of origin, the volume, and the value. The declaration requirement does not apply to all wood products, but it covers solid wood. Providing false information is punishable under the law.

### What is illegal under the Lacey Act?

Two things need to happen to incur a Lacey Act violation. First, a plant must be taken, harvested, possessed, transported, sold, or exported in violation of an underlying law in the United States or any foreign country that protects plants or regulates the following:

- Stealing plants;
- Taking plants from an officially protected area, such as a park or reserve;
- Taking plants from other types of "officially designated areas" that are recognized by a country's laws and regulations;
- Taking plants without, or contrary to, the required authorization; or

- Failing to pay appropriate royalties, taxes, or fees associated with the plant's harvest, transport, or commerce; or
- Laws governing export or transshipment, such as a log-export ban.

Second, an individual or company must trade this illegally-sourced plant in the United States to trigger a Lacey violation.

Penalties depend on a variety of factors including level of knowledge, whether the violation is perpetrated by an individual or a corporation, and the value of the products.

For more information about the Lacey Act, please visit [www.aphis.usda.gov/plant\\_health/lacey\\_act/](http://www.aphis.usda.gov/plant_health/lacey_act/).

## CITES

The Convention on International Trade in Endangered Species (CITES) is a legally binding agreement in which countries (or parties) agree to establish controls for the international trade of selected species. Based on the degree of protection needed, species are listed in one of three CITES appendices:

- **Appendix I** – Appendix I lists species considered to be under threat of extinction. Trade is permitted but under restricted circumstances. One Honduran timber species is listed in Appendix I: pine/piñabete (*Abies guatemalensis*).
- **Appendix II** – Trade of species listed in Appendix II is controlled and regulated to ensure species survival. Permits or certificates should be granted only if certain conditions are met, and if trade will not be detrimental to the survival of the species in the wild. Four Honduran timber species are listed in Appendix II: mahogany/caoba (*Swietenia mahagoni*, *Swietenia humilis*, *Swietenia macrophylla*) and holywood/ guayacán (*Guaiacum sanctum*).
- **Appendix III** – Appendix III species are subject to special management within a country that has asked other CITES parties for assistance in controlling the trade. One Honduran timber species is listed in Appendix III: cedar/cedro (*Cedrela odorata*).

Any party can propose adding, deleting, or moving species to and between Appendices I and II, but the final decision is made by a vote of the Conference of the Parties. Any party can submit a species for listing in Appendix III, along with the trade restrictions, within its jurisdiction. All import, export, and re-introduction of species covered by CITES must be authorized through a licensing system established by the parties. Each party designates one or more management authorities to administer the licensing system, advised by one or more scientific authorities.

Honduran government agencies involved in implementing CITES include:

- **Management authority** (the National CITES office under the Ministry of Agriculture and Livestock). Coordinates the implementation of CITES; maintains a registry of those involved in trade of CITES species; issues import/ export permits and oversees transport, export, re-export, and import of CITES species.
- **Scientific authorities** (units in the Forest Conservation Institute (ICF), along with the Ministry of Environment as well as various academic institutions). Facilitate the completion of CITES species inventories; verify compliance with CITES

regulations; issue CITES permits that are used as the basis for the management authority to issue export permits.

- **Enforcement agencies** (the special prosecutor for the environment in the office of the district attorney, the attorney general for the environment, and others). Enforce and prosecute violations.

In Honduras, CITES licenses are needed to export specimens and parts of products or finished products made or derived from CITES species. To obtain a CITES license, the exporter submits a request to the management authority with supporting documentation, which includes invoices and documents proving the legality of the product. Then, the management authority forwards the application to the relevant scientific authority for sign off; after sign off, licenses are issued by the management authority. For timber products, CITES export permits include the amount and volume of wood to be exported, the species involved, the origin of the wood in case the exporter is an intermediary, the type of products the wood will be made into, and the intended destination of the export.

**Sources:** CITES 2011, Secretaría de Agricultura y Ganadería de Honduras, 2004, n/d, and 2011.

## Because of the CITES listing, the harvesting, transportation, and trade of mahogany requires special permits issued by in-country CITES authorities.

In Honduras, mahogany is found in remote areas like the Mosquitia in the eastern part of the country, including the buffer and cultural zones of the Río Plátano Biosphere Reserve (Box 3). One of the most notorious cases of illegal logging in the region came to light between 2006 and 2007. In 2006, the Honduran government stepped up forest control efforts in Honduras' main protected areas and as a result, traffickers abandoned their illegally harvested wood when facing law enforcement personnel. The forest authority devised a mechanism to sell the "abandoned" timber through local cooperatives. However, the mechanism was suspended because it contravened with the law, and the government established another mechanism to sell wood at public auctions. It has been said that both mechanisms encouraged additional illegal logging because they, in fact, legalized illegal wood through the manipulation of wood inventories (Global Witness 2009, El Heraldo 2010). Some of the abandoned mahogany was stolen and found later in the possession of the Honduran branch of a U.S.-based company, Millworks International. A case against Millworks was begun in 2006, and in 2010, the Honduran Supreme Court found the company

guilty of possessing illegal wood. However, by then, Millworks had closed operations in Honduras.

Complex bureaucratic processes and inadequate law enforcement capacity create an environment that enables illegal logging in Honduras.<sup>2</sup> A somewhat dated 2003 assessment estimated that 75–85 percent of Honduras' hardwood production and 25–35 percent of its pine production was illegal between 1996 and 2000 (Del Gatto 2003). Claims and first-hand accounts of illegal logging involve logging within protected areas, use of false documents, tax fraud, harvesting without proper authorization, trade of stolen timber including CITES species, corruption, and cronyism (EIA 2005, MAO, n/d).<sup>3,4</sup> Many of these activities potentially qualify as violations of "underlying laws" as described in the Lacey Act.

## OVERVIEW OF THE SUPPLY CHAINS

### Producers

In the Río Plátano Biosphere Reserve buffer zones, 12 community cooperatives have five-year forest-management contracts on public lands to extract and produce timber. The contracts can be renewed for up to

40 years, and are currently in various stages of negotiation and renewal.<sup>5</sup>

To harvest the mahogany legally, the cooperatives must have approved forest management plans (FMP) and annual operation plans (AOR). The processes identified in these plans involve approximately 23 administrative procedures and a number of stakeholders. The cooperatives must also implement a system to track the mahogany (Boxes 4A and 4B). Figure 1 illustrates the legality requirements with which the cooperatives must comply, along with the potential opportunities for illegal activity to be introduced into the supply chain.

The cooperatives have relatively low capacity to harvest, process, and trade the timber, and to navigate the administrative requirements to produce legal timber. They lack sufficient equipment and training, and they have technical, financial, and administrative limitations. Lack of capital, poor road infrastructure, increasing drug trafficking activity and violence, and land-use changes exacerbate the challenges (Fortin et al. 2010, Brehm 2000).



Loading mahogany to be processed in the community sawmill, Copén.

A number of NGO-initiated and projects, supported by international donors,<sup>6</sup> have been established to connect the demand for mahogany from international markets with the supply in Honduras. These initiatives often focus on strengthening com-

## THE RÍO PLÁTANO BIOSPHERE RESERVE

The Río Plátano Biosphere Reserve (RPBR) is situated in the Mosquitia region of north-east Honduras (see map below). Covering approximately 800,000 hectares, it is the largest natural forest reserve in Honduras. The reserve has been included on the World Heritage List since 1982. The protected area was established to promote sustainable development based on local community efforts and scientific research.

The RPBR includes three zones:

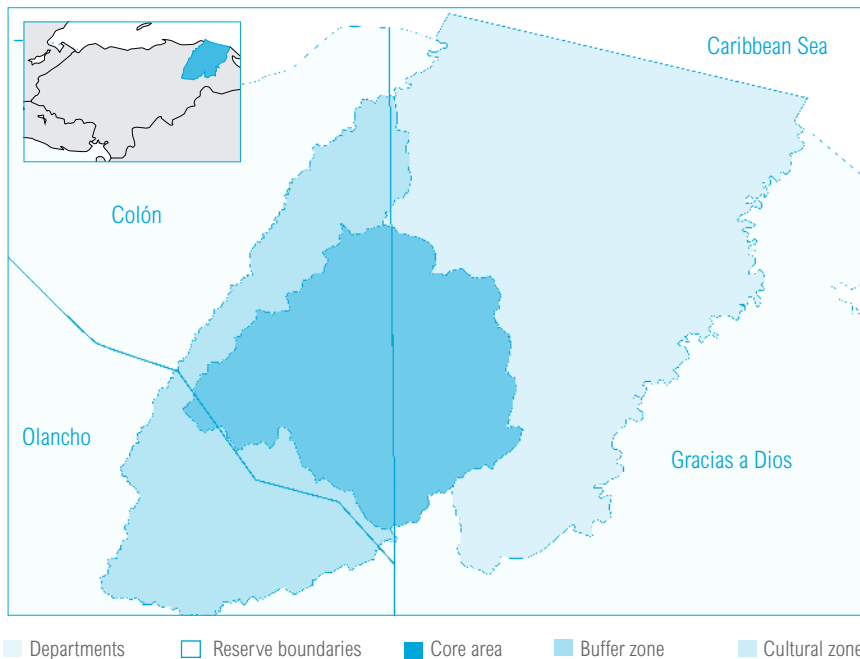
- **Core area** (210,733 hectares), devoted to long-term protection. The area is lightly inhabited but it is threatened by agricultural expansion, mostly in the southern part.
- **Buffer zone** (193,374 hectares), where a wider range of economic activities—deemed compatible with the conservation objectives—is allowed; this area has the largest human population and the most deforestation.

- **Cultural zone** (424,225 hectares), dominated by indigenous Miskito populations.

About 85 percent of the reserve is tropical rainforests. Most of the human pressure in the reserve occurs in the buffer zone, where there are substantial, ongoing, land-use changes. The highest rates of deforestation are concentrated in the western and southern buffer zone, driven largely by conversion of forest to pasture for cattle ranching. In 2011, the United Nations Educational, Scientific and Cultural Organization (UNESCO) added the RPBR in the List of World Heritage Sites in Danger because of concerns about the protection of the area due to illegal logging, illegal occupation, increased drug trafficking, and a general deterioration of the rule of law and security in the region.



Sources: CONADEH 2011, IFC 2011, Global Witness 2009, UNESCO 1996, 2011a and 2011b, Park 2001.



Map source: IFM, CONADEH.

munity capacity in terms of sustainable forest management, timber processing, administrative and financial management, and organizational capacity.

Three organizations work with the cooperatives and facilitate the business relationships with the buyers. In Supply Chain A, cooperatives Miraflores, El Venado, and Zapotales (MIRAVEZA), Brisas de Copén, and Limoncito supply mahogany to Taylor Guitars with support from Fundación Madera Verde and GreenWood. In Supply Chain B, the Union of Agroforestry Cooperatives of the Río Plátano Biosphere Reserve (UNICAF, *Unión de Cooperativas Agroforestales de la Biosfera del Río Plátano* in Spanish) processes and sells wood from nine cooperatives to North American Wood Products International (NAWPI). Some of that wood is sold to Gibson Guitars (Table 1).

## SUPPLY CHAIN A

Figures 2 and 2.1 illustrate the activities along supply chain A, the location of each activity, and the actors involved.

### Intermediaries and facilitators

GreenWood and Fundación Madera Verde

GreenWood is a U.S.-based non-profit organization that works with small-scale producers in developing nations to help increase local capacity and market access for sustainable wood products.<sup>7</sup> In 1993 GreenWood established operations in Honduras, as a field project of the Woodworkers Alliance for Rainforest Protection (WARP) and,

eventually, the Good Wood Alliance. GreenWood was incorporated as a U.S. nonprofit in 2001. In Honduras, GreenWood established the Green Wood Foundation (FMV –Fundación Madera Verde) as a legal nonprofit entity in 2004. FMV became independent in 2008.<sup>8</sup>

Both organizations continue to collaborate closely in Honduras providing technical assistance, building local capacity, and facilitating access to markets. FMV is owned and operated by a local board and staff. It works directly with three cooperatives in the buffer zone of the Río Plátano Biosphere Reserve: Brisas de Copén, MIRAVEZA, and Limoncito. The first commercial loads of mahogany for export came from the Brisas de Copén cooperative in 2005, followed by MIRAVEZA in 2008, and Limoncito in 2009.

The first contacts between GreenWood and Taylor Guitars, the ultimate buyer in Supply Chain A, occurred between 1999 and 2000, when GreenWood approached the company as a potential buyer for mahogany from Copén. After testing some mahogany samples, Taylor invited the producers to supply an entire container. On behalf of the Brisas de Copén cooperative, GreenWood negotiated prices and specifications with Taylor, and arranged for kiln drying and shipping as well as export documentation. Over time, GreenWood also helped secure commercial loans to purchase heavily-discounted sawmill equipment for the cooperatives, as well as donations to support and strengthen the operation. GreenWood also works with Taylor, and other buyers, evaluat-

ing wood marketing opportunities, grades, species, and developing new products.

## Buyer

### Taylor Guitars

In 1999, Taylor Guitars, a well-known manufacturer of acoustic and electric guitars in the United States, was approached by GreenWood with a proposal to work directly with sourcing communities.<sup>9</sup> The company took the opportunity and placed an order paying up front for the product. It took five or six years to acquire the first container of sawn mahogany. As Bob Taylor, the company's president, said, it was necessary to "invest in the inevitable,"<sup>10</sup> — that is, to take steps to secure a sustainable supply of legal mahogany for its guitars, at a time when the supply is steadily decreasing and the demand remains constant.

Taylor Guitars relies on the cooperatives for a continued supply of legal mahogany, and the cooperatives rely on Taylor to purchase their products consistently and under terms that satisfy both parties. The wood is sawn according to the specifications needed for a variety of guitars and in a way that maximizes efficiency and minimizes waste.<sup>11</sup> Taylor Guitars' staff visits the communities at least once every other year to fully understand and support the harvesting and primary processing, and to work with them in the introduction of new products and grades (Kirlin 2011).<sup>12</sup>

## Supply chain control system

With financial support from the U.S. Forest Service, FMV is working with the cooperatives to pilot a barcoding

BOX 4A

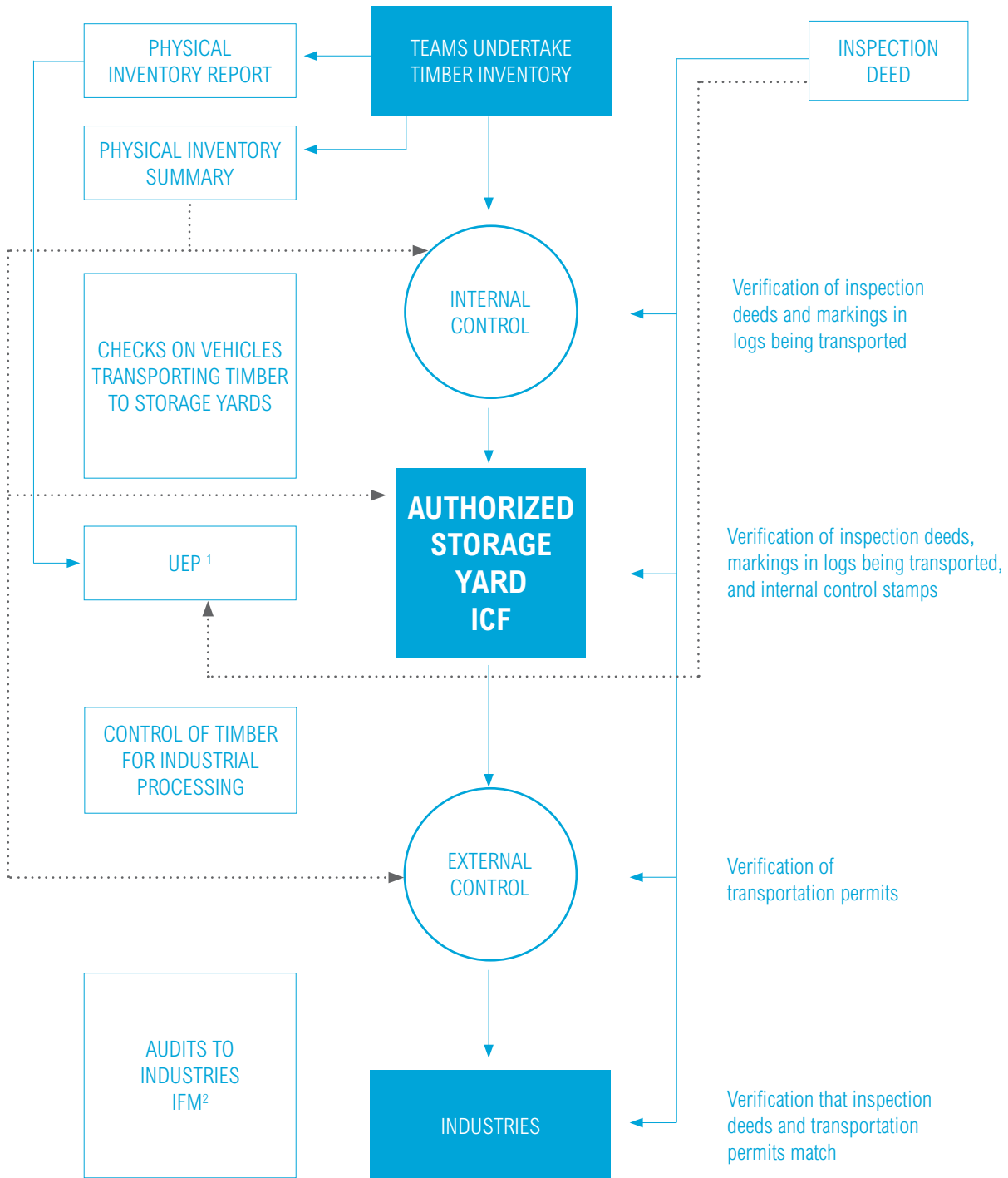
## MAHOGANY TRACKING SYSTEM FOR COMMUNITIES IN THE RPBR

The cooperatives must comply with a tracking system to monitor and control the mahogany extracted from the RPBR. The system was designed in 2008, at the insistence of the Forest Conservation Institute (ICF- Instituto Nacional de Conservación y Desarrollo Forestal), the forest authority in Honduras. The system is meant to facilitate the verification of the origin of the wood, and it consists of marking and verifying timber along the supply chain. (See Box 4B) The implementation of the system requires support from ICF, which is not always available. Compliance adds a financial burden to small producers.<sup>1</sup> In November 2011, ICF began promoting the expansion of the system for cedar products.<sup>2</sup>

### Footnotes:

- 1 Ben Hodgdon, project manager with the Rainforest Alliance's TREES Program, personal comment (4/2012); Brown et al. 2010; MFI, 2006A.
- 2 Scott Landis, GreenWood executive director, personal comment (4/2012).

## IFC TRACKING SYSTEM FOR MAHOGANY



Footnotes:

- 1 Project Implementation Unit (in Spanish).
- 2 Independent Forest Monitor

Legend:

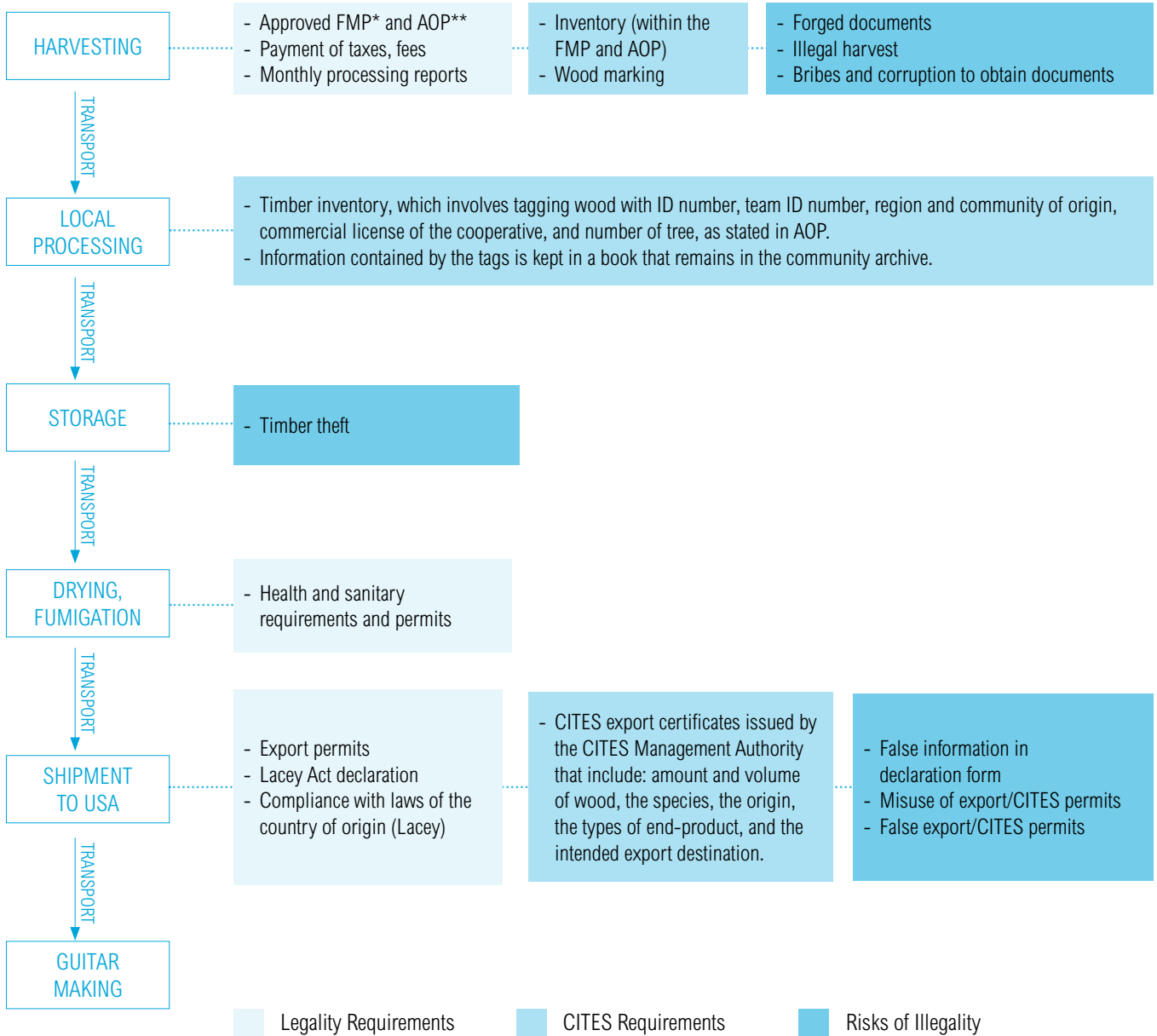
..... information at each check and control is matched against the information contained in the inspection deed.

Source: based on MFI, 2006a and Global Witness, 2009.



FIGURE 1

## GENERIC CHAIN: LEGALITY REQUIREMENTS (INCLUDING CITES) AND RISKS OF ILLEGALITY



Notes:

FMP: Forest Management Plans

AOP: Annual Operation Plan \*There are 8 steps to approve the forest management plan. This process includes landowners/ concessionaires, contractors, consultants, professional associations and local and central government officials. It also involves stakeholder consultation and coordination processes.

\*\*There are 15 steps to approve and implement the annual operational plans. Actors involved in this process include landowners/concessionaires, contractors, consultants, local and central government officials, enforcement agencies (police, army), and professional associations. It also involves stakeholder consultation and coordination processes. There are control and checkpoints to verify transportation permits as the wood is moved along the supply chain. For CITES protected species, this includes the verification of tags or control marks on the wood.

Risks of illegality transporting the wood includes bribes to obtain false transportation permits, bribes at checkpoints to let the wood pass, and use of false transport permits.

## COOPERATIVES IN RPBR BUFFER AND CULTURAL ZONES HIGHLIGHTED IN THIS BRIEF

Cooperative	Communities	Associated Facilitators	Supply Chain
<b>SOUTH BUFFER ZONE</b>			
Mahor	Mahor	UNICAF	B
Sawacito	Sawacito	UNICAF	B
El Guayabo	El Guayabo	UNICAF	B
<b>CULTURAL ZONE</b>			
Won Helpka	Wampusirpi, Raiti, Bodega, Raya, Buena Vista, Bravilla, and Bil Almut	UNICAF	B
Yabal Ingnika*	La Pimienta, Pansana, Arenas Blancas, Nueva Esperanza, Tukrun, Bella Vista, and Kurpa	UNICAF	B
CAIFUL*	Brus Laguna	UNICAF	B
<b>TRANSITION ZONE</b>			
Altos de la Paz*	Altos de la Paz, Casa Quemada, Brisas del Valle, and Serrania	UNICAF	B
Río Payas*	Río Payas	UNICAF	B
Maya Tulito	Maya Tulito	UNICAF	B
Brisas de Copén*	Copén	UNICAF, Fundacion Madera Verde	A
Limoncito	Limoncito	Fundacion Madera Verde	A
MIRAVEZA*	Miraflores, El Venado, and Zapotales	UNICAF, Fundacion Madera Verde	A

Sources: Compiled from Fortin et al. 2010 and Zambrano 2008.

Note: \*These cooperatives have achieved Forest Stewardship Council certification.

FIGURE 2

## SUPPLY CHAIN A: WHO DOES WHAT WHERE

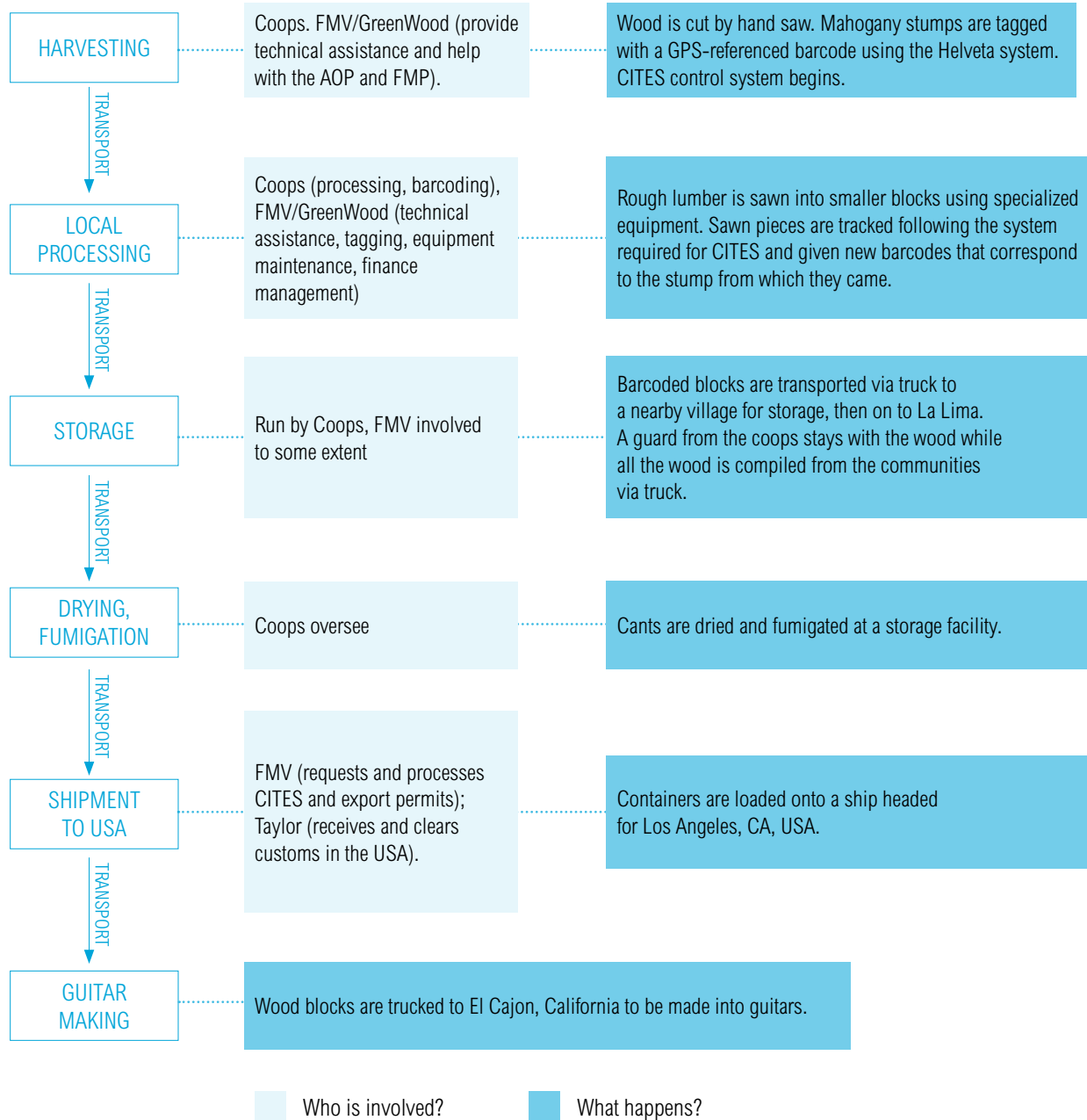


Figure 2 illustrates the activities along supply chain A, the location of activities, and the actors involved.

Notes:

- AOP: Annual Operation Plan
- RPBR: Rio Platano Biosphere Reserve
- FMP: Forest Management Plans
- FMV: Fundacion Madera Verde
- ICF: Instituto de Conservacion Forestal (Honduran Forest Authority)
- Cooperatives: MIRAVEZA, Brisas de Copen and Limoncito.
- Wood from the RPBR is transported to the communities for local processing via mule.

FIGURE 2.1



information system (see Box 5) to track and document the wood flow throughout the supply chain. This system adds a layer of transparency and control to the entire process.<sup>13</sup>

Members of the cooperative are trained in the tagging and scanning of the barcodes. “It’s worth it to implement this barcode system because, year after year, the national authorities are recognizing our efforts, and foreign companies are recognizing them, too. And there’s less pressure [for bribes] at the checkpoints since they know that the cooperative does business in a legal way,” said Eliberto Barahona,

president of the Brisas de Copén cooperative.<sup>14</sup>

If donor funding did not support the full implementation of the tracking system, Taylor Guitars would continue to buy the wood. The company is confident that its on-the-ground visits and direct, long-term relationships with suppliers and facilitators will ensure the legality of the wood.<sup>15</sup> However, the tracking system helps satisfy its need to ensure and demonstrate not only the legal origin of the wood, but also the social benefits that the relationship brings to the communities. For its other supply chains, Taylor Guitars either buys or

is looking into buying FSC-certified wood.<sup>16</sup>

## SUPPLY CHAIN B

Figures 3 and 3.1 illustrate the activities along supply chain B, the location of activities, and the actors involved.

### Intermediaries and Facilitators

#### Rainforest Alliance

The Rainforest Alliance works to conserve biodiversity and ensure sustainable livelihoods by transforming land-use practices, business practices and consumer behavior.<sup>17</sup> Through

## HELVETA'S CI WOOD TRACKING SYSTEM

Helveta's CI World™ software platform supports supply-chain management and assets tracking through the supply chain. This tracking allows users to manage inventory, to document and prove the origin of the products and, in some cases, for governments to improve collection of taxes. For wood tracking, the platform CI World for Forestry involves four modules to:

- Map forest resources using handheld computers with a global position system (GPS) receiver;
- Trace and monitor the supply chain;
- Store, produce, and manage documents related to the wood; and
- Validate and reconcile the data.

In Honduras, community members and FMV staff nail barcodes to the sawn stumps at the harvest location; corresponding barcodes are attached to the processed timber from the point of felling until the sawn and kiln-dried parts are shipped to the United States. Every tree (stump) receives the first tag, which is scanned with a handheld PDA (personal digital assistant). The PDA registers GPS

coordinates, and the operator inputs the tree's diameter at breast height, ICF code, log lengths and pre-classification coding (whether the timber is considered export bound or designated for the national market). As the log is converted into smaller blocks with a chainsaw, numbers are added to the ICF code (e.g., 1–5) for each cant from the block (two or five pieces per block). Each cant receives its own tag, which is scanned into the system, and corresponds to the original stump barcode. (When the operator returns from the field, the information is transmitted via Internet to a database managed by Helveta.)

New tags are applied at the community sawmill, when the cants are transformed into pieces, and once again after the pieces have been kiln dried, end cut, and prepared for export shipment. Then, the wood is dried and the tags are removed. New tags are placed on the cants and they are loaded into containers bound for Acajutla, El Salvador.

For more details about Helveta's CI system for tracking wood, please visit <http://corporate.helveta.com>.

its Training, Extension, Enterprises and Sourcing (TREES) Program, Rainforest Alliance provides technical assistance to community producers, and it has been working with the cooperatives and others since 2005 to build the cooperatives' capacity to manage forest businesses, increase production efficiency, improve quality, design and market value-added products, and facilitate connections with buyers (Rainforest Alliance 2008).

In 2005, with strong support from the Rainforest Alliance and the German Development Service (GIZ—Deutsche Gesellschaft für Internationale Zusammenarbeit), the cooperatives banded together to form a second-tier organization called Union of Agroforestry Cooperatives of the Río Plátano Biosphere Reserve (UNICAF – Unión de Cooperativas Agroforestales de la Biosfera del Río Plátano). UNICAF assists its member cooperatives in value-added processing and marketing, helps secure forest management permits, and holds a group FSC certificate for seven members that have achieved FSC certification. Together, the UNICAF cooperatives now comprise more than 500 families that collectively manage 104,000 hectares. UNICAF buys wood from the cooperative members, processes it, and sells it to North American Wood Products International (see below), which in turn sells it to Gibson.

### Buyers

North American Wood Products International (NAWPI)

NAWPI is a global distributor of exotic wood products based in Portland, Oregon. NAWPI is a broker that imports wood from Honduras



## SUPPLY CHAIN B: WHO DOES WHAT WHERE

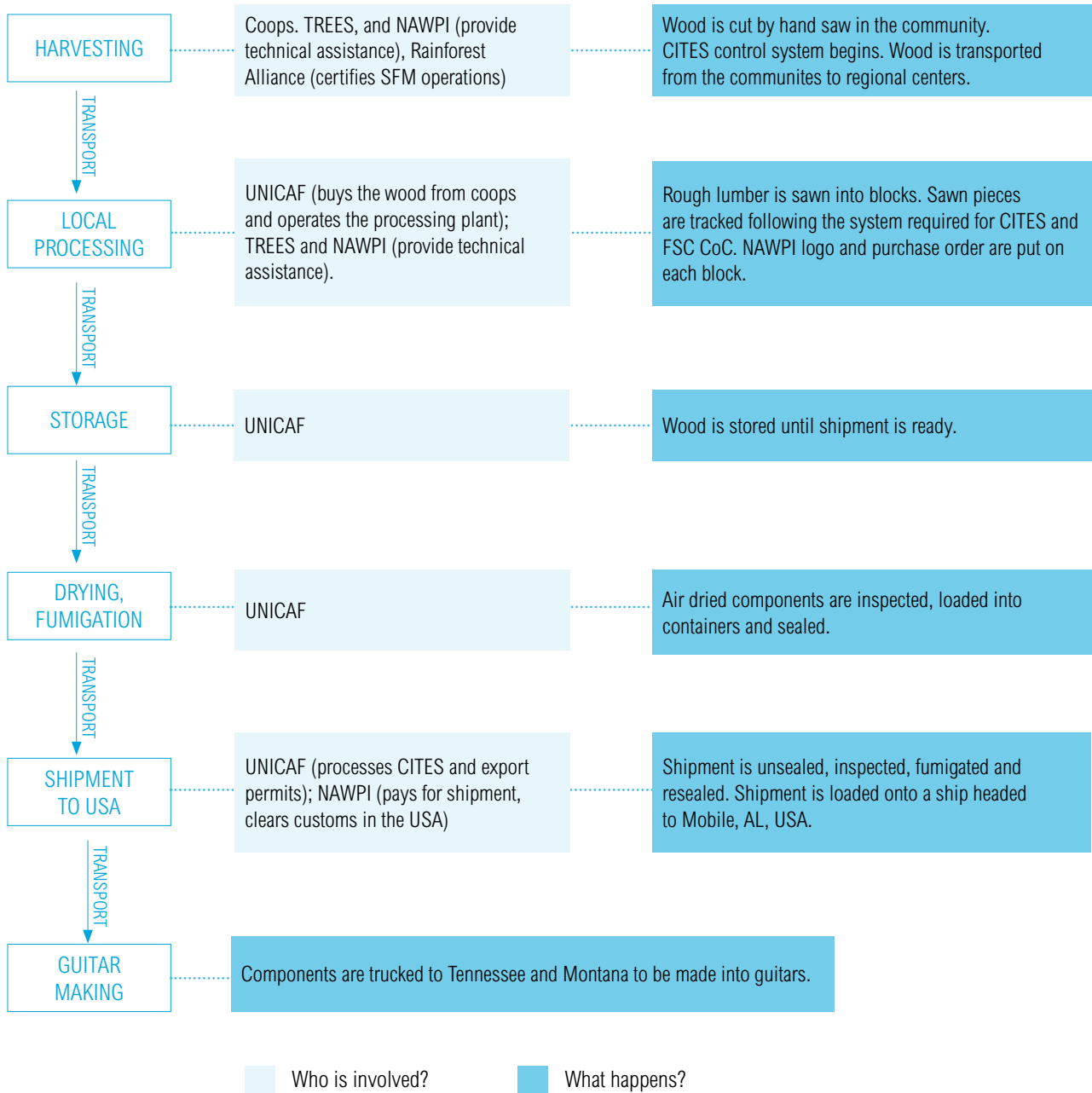
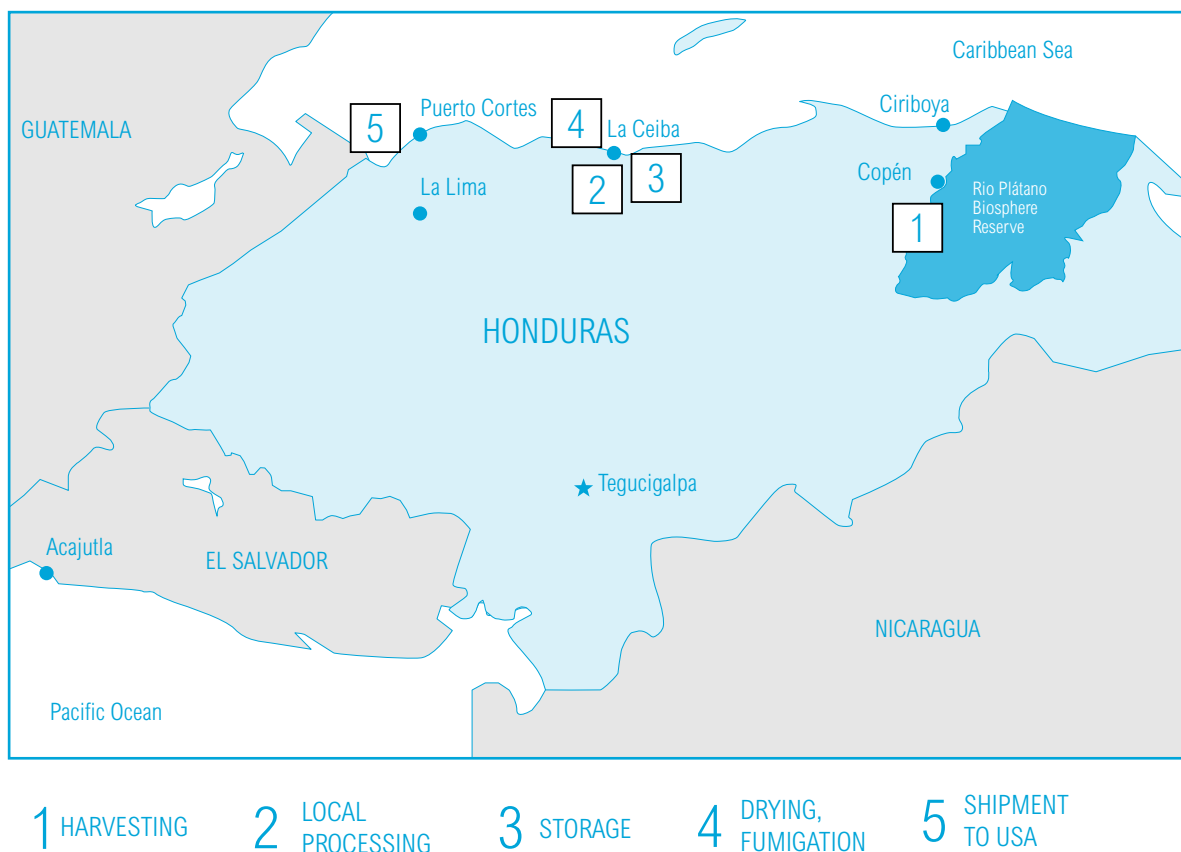


Figure 3 illustrates the activities along supply chain B, the location of activities, and the actors involved.

Notes:  
 AOP: Annual Operation Plan  
 RPBR: Rio Platano Biosphere Reserve  
 FSC CoC: Forest Stewardship Council Chain of Custody  
 ICF: Instituto de Conservacion Forestal (Honduran Forest Authority)  
 NAWPI: North American Wood Products

SFM: Sustainable Forest Management  
 UNICAF: Unión de Cooperativas Agroforestales de la Biósfera del Rio Platano.  
 Union of Agroforestry Cooperatives of the Rio Platano Biosphere Reserve  
 Cooperatives: Yabal, Ingnika, Caiful, Altos de la Paz, Rio Payas. Wood from the RPBR is transported from the place of harvest to the place of local processing via mule, river and/or truck.

FIGURE 3.1



and then sells it to Gibson's manufacturing facilities in Nashville and Memphis, Tennessee, and Bozeman, Montana. With Gibson's introduction, Rainforest Alliance facilitated the initial contract between NAWPI and the cooperatives to provide mahogany blocks to Gibson in 2005. Since 2005, NAWPI, in collaboration with the Rainforest Alliance and UNICAF, has provided financial and technical assistance to the cooperatives. This assistance includes cash advances for working capital; loans and grants for management plans; permits and to facilitate transportation; assistance in the forest on how

to cut instrument-grade cants with a chain saw; assistance at the UNICAF processing facility in maintenance, handling, recovery, grading and packaging of the final products for export; and technical and financial assistance in achieving and maintaining FSC forest management and chain-of-custody certification.

### Gibson Guitar

Gibson Guitar is a leader in the design and manufacture of electric guitars in the United States.<sup>18</sup> For nearly 10 years, Gibson Guitar has been collaborating with the Rainforest Alliance on the sustainable

procurement of certain woods to be used in guitar manufacturing.<sup>19, 20</sup> The Rainforest Alliance's Markets Program works specifically with Gibson on the sustainable procurement of certain woods to be used in guitar manufacturing, and it played a critical role in helping Gibson better understand its supply chains. Gibson sources mahogany not only from community cooperatives in Honduras, but also from the neighboring Guatemalan Maya Biosphere Reserve (Rainforest Alliance 2009). For the wood that is not sold to NAWPI (mahogany and some cedar), the Rainforest Alliance works with the

communities to find new domestic and international markets. With the Rainforest Alliance's assistance, the wood is sold to door, window, and furniture manufacturers in San Pedro Sula or La Ceiba in Honduras, who then export the finished products to the United States.

### Supply chain control system

The Rainforest Alliance and its partners have assisted UNICAF and the communities in achieving FSC forest management and chain-of-custody certification (see Box 6). In the past, wood illegally harvested from the cooperatives' concessions, or stolen from the cooperatives, was usually laundered by traders and other actors. For UNICAF and the communities involved in this supply chain, the demand for FSC-certified timber has been instrumental in enabling them to move toward, and ultimately achieve, certification.<sup>21</sup>

Unlike the FMV/GreenWood supply chains, where wood is processed in the communities, UNICAF has invested in secondary processing equipment facilities at its new facility in La Ceiba, which is undergoing the FSC CoC certification process, as well as two regional processing centers located strategically in the RPBR. Communities typically process felled timber to rough cut blocks in the woods, then transport the blocks to these centralized facilities, and then on to UNICAF for reprocessing and value-added production for domestic and foreign markets.

## ANALYSIS AND FINDINGS

### Supply chain control systems and the Lacey Act

Systems like barcoding and CoC certification help those along the supply chain better understand and control the harvest of trees and the management of the supply chain. In countries deemed "high risk" due to

standing, direct personal relationships with community suppliers and facilitators.

In both supply chains, the buyers had been working with the communities, intermediaries, and facilitators before the Lacey Act was amended in 2008. Thus the Lacey Act has had little or no impact on how these supply chains are managed.

### The role of intermediaries and facilitators

The communities in the area can have a difficult time gaining direct access to international markets due to their remote location and other limitations. The effort required to harvest the mahogany and get it into the nearest town for transport via truck is, in itself, hugely labor intensive and time consuming.

Functionally, in both supply chains, the cooperatives harvested the trees and processed the wood to some extent, but did not interact directly with the international buyers. To some extent, the intermediaries and facilitators served as the communities' interface with the global market.

FMV and GreenWood, and UNICAF and Rainforest Alliance have played critical roles helping the cooperatives manage their supply chains, navigate administrative processes (including CITES requirements), forge trade relationships with buyers in the United States, and process the mahogany for higher value-added products that meet the specific demands of international buyers. In

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Committed buyer relationships and use of third-party standards and innovative management tools can increase the feasibility of meeting legal requirements, even in the most difficult of contexts.

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corruption and lack of law enforcement, these extra measures can help reduce the risk of trade in illegal wood. Also, through the barcoding tracking system, Taylor can demonstrate supply-chain transparency for its Honduran mahogany.

Many companies value certification systems as a means of demonstrating supply-chain clarity and commitment to sustainability. However, Taylor has not seen the need to use certification systems to date, due in part to the fact that it has long-



the case of GreenWood and FMV, GreenWood negotiated the purchase of WoodMizer sawmills at discounted prices.<sup>23</sup> FMV provides financial management support to Brisas de Copén, MIRAVEZA, and Limoncito and oversees kiln drying, customs brokerage, and all related legal and administrative steps. Both GreenWood and FMV collect a portion of the revenue from wood sales, and they also help develop new products and grade classifications; negotiate sales, wood prices, and payment systems with buyers; and arrange commercial loans.

The productive operations and the implementation of the control systems themselves (e.g. the Helveta barcoding system), that are managed by FMV and GreenWood have resulted in additional income to the communities through the creation of jobs (e.g. technicians to operate tracking equipment and attach barcodes). Another outcome is that some cooperatives now interact directly with the buyers.<sup>23, 24</sup>

The communities have benefited from the technical assistance from the intermediaries and facilitators. A Rainforest Alliance evaluation of its training activities between 2005 and 2008 concluded that its training in business management and organization and techniques for value-added production, among others, contributed to a sustained and more efficient production of high-quality wood, an increase in local income, and reduction of illegal wood traffic in the area of influence of the UNICAF partner cooperatives (Fortin et al. 2010). Another benefit from the interaction with intermediaries and facilitators has been access to donor support tied to investments in infrastructure and social development.

## Financial Implications

These supply chains and the control systems work thanks to long-term commitments from the buyers, advance payments, and, in some instances, investments in infrastructure and capacity building in the communities by outside donors. The finished guitars sell for a high price and buyers are in a position to pay in advance for the wood and, in some cases, pay above market rates for sustainable wood.

In terms of financial and social benefits to the communities, it is estimated that nearly half of the income in the Copén community comes from sales of guitar wood (Taylor Guitars 2009). This revenue is used to buy livestock, build schools, and help communities gain access to electricity. The cooperatives benefit because they have a committed buyer, and the guitar manufacturer benefits because it has a consistent and sustainable source of high-quality mahogany.

In supply chain B, NAWPI also made an advance payment for the first purchase order. The presence of the Rainforest Alliance and other partners provided an informal “guarantee” for this advance.<sup>25</sup> Gibson’s demand for FSC-certified wood has, since 2005, generated over US\$500,000 in direct payments to the communities<sup>26</sup> and helps incentivize the cooperatives to become FSC certified.

Donor support has been critical to building the capacity of the communities to manage their forests, process the wood and implement the supply-chain control systems. The Rainforest Alliance has channeled funds for technical assistance

## BOX 6

### FOREST STEWARDSHIP COUNCIL CERTIFICATION

To date, seven UNICAF members have achieved forest management certification according to standards of the Forest Stewardship Council (FSC). Their certified forests cover over 50,000 hectares. Forest certification is a voluntary, market-based approach to define and verify good forest stewardship. FSC certification means that an independent body has verified that the management of the forests from where the products originate complies with the FSC standards for responsible forest management. The FSC standards are based on global principles and criteria that are fitted to the context of countries and regions, forest types, and management regimes. Independent bodies that verify compliance with the FSC standards are accredited by FSC and they audit the forest operation at least once a year.

To be able to trade forest products with the FSC logo, the forest manager must also obtain a FSC chain-of-custody (CoC) certification. FSC CoC certification allows tracking the certified wood from the forest throughout the different steps in the supply chain. Operations that have achieved FSC CoC certification are required to identify the origin of the raw materials that are FSC certified and to keep these materials separate from other products through the production process. For more details about FSC certification and the different standards and procedures, please visit [www.fsc.org](http://www.fsc.org).

In the case of the UNICAF cooperatives highlighted in this issue brief, no wood has yet been sold with the FSC label because the separate CoC certificate for the processing facility was still in process at the time of publication.

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activities since 2005 to equip and build UNICAF's capacity,<sup>27</sup> and the U.S. Forest Service covered the initial Helveta fees for the barcoding system. Without these external investments, these supply chains would not work. Although investments in infrastructure and social development support the sustainability of the community's productive operations, it remains unknown if long-term financial sustainability will be achieved.<sup>29</sup> However, the activities to support community forest enterprises have attracted others to invest in community development. These investments include projects to bring solar energy to households, and a microhydroelectric project that brought turbines and power generation equipment to Brisas de Copén and MIRAVEZA.<sup>29</sup>

There are no systematic estimates of how much the implementation of the supply-chain control systems add to the wood production costs. In addition, there have been few efforts to systematically analyze the role of subsidies and donor support in the economics of community forest enterprises.<sup>30</sup> In some cases, and to some extent, it appears that the additional costs are incorporated as costs of doing business, particularly in the FMV/GreenWood supply chain.<sup>31</sup> A more in-depth study to understand the financial viability of the operations without these external funds is needed.

## CONCLUSION

Committed buyer relationships and use of third-party standards and innovative management tools can increase the feasibility of meeting legal requirements, even in the most difficult of contexts. Intermediary actors like FMV and Greenwood and UNICAF and the Rainforest Alliance play a significant role in facilitating a more transparent and systematic trade between Honduran producers and buyers in the United States and Europe. Systems like barcode tracking and FSC certification are additional tools for providing assurance in this remote and high-risk environment and can help dedicated buyers, like Taylor and Gibson, meet both legal requirements and corporate standards.

For a complementary video, please visit [www.forestlegality.org/media-resources/videos](http://www.forestlegality.org/media-resources/videos).

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## ENDNOTES

- 1 Chris Cosgrove, supply chain manager at Taylor Guitars, interview (10/2010).
- 2 Forests in public and private lands in Honduras fall under the jurisdiction of the Forest Conservation Institute (ICF – Instituto Nacional de Conservación y Desarrollo Forestal). ICF is ultimately responsible for ensuring compliance with forest management plans and laws, and a vehicle to verify compliance is through the preparation and approval of annual operation plans. The process to approve forest management plans and annual operation plans has been analyzed in detail by the Tropical Agricultural Research and Higher Education Center and its partners, which identified 23 administrative processes in the development, approval, and implementation of forest management plans, involving a wide variety of actors. This complexity provides opportunities for corruption. For more details, see Brown et al. 2010).
- 3 Confidential interviews with participants at the workshop: El sector forestal Hondureño en un contexto internacional cambiante. Siguatepeque, Honduras. September 17 2010.
- 4 Testimonio del Movimiento Ambientalista de Campamento (CAM) sobre la tala ilegal y el mercado europeo de la madera. Video online at <http://www.youtube.com/watch?v=2XyZ7xzZgrw> (4/18/12).
- 5 Ben Hodgdon, project manager with the Rainforest Alliance's TREES Program, interview (9/2010).
- 6 Initiatives and projects are funded by USAID, the Global Environment Fund (GEF), the Canadian International Development Agency, German Development Service (GIZ – Deutsche Gesellschaft für Internationale Zusammenarbeit), and others.
- 7 For more information on GreenWood, please visit [www.greenwoodglobal.org](http://www.greenwoodglobal.org).
- 8 For more information on FMV, please visit <http://maderaverdehonduras.org/web/index.php/component/content/?view=featured>.
- 9 Bob Zink, purchasing manager at Taylor Guitars, interview (10/2010).
- 10 Bob Taylor, Taylor Guitars president, interview (4/2011)
- 11 Charlie Redden, supply chain manager at Taylor Guitars, interview (10/2011); Scott Landis, personal communication (2/2012).
- 12 Chris Cosgrove, Taylor Guitars, interview (10/2010).
- 13 Martín de la Serna, former vice president for sales and marketing at Helveta Ltd, interview (10/2010).
- 14 Eliberto Barahona, president of the Brisas de Copén cooperative, interview (12/2011).
- 15 Bob Zink and Chris Cosgrove, Taylor Guitars, interview (10/2010).
- 16 Ibid.
- 17 For more information on the Rainforest Alliance and its projects, visit [www.rainforest-alliance.org](http://www.rainforest-alliance.org).
- 18 For more information on Gibson, visit [www.gibson.com](http://www.gibson.com).
- 19 For more details, visit <http://www.rainforest-alliance.org/newsroom/news/gibson-release-jul10> (4/18/12).
- 20 Until fall 2009, Gibson CEO Henry Juszkiewicz was on the board of Rainforest Alliance, but he took a leave of absence following a highly publicized raid on the Gibson factory in November 2009 in relation to a suspected violation of the Lacey Act due to importation of suspected illegally harvested woods from Madagascar. For up to date information on Gibson and the Lacey Act, visit [www.eia-global.org](http://www.eia-global.org).
- 21 Leónidas Santos, former UNICAF president, interview (12/2010)
- 22 Scott Landis, GreenWood, personal communication (2/2012)
- 23 Ben Hodgdon, personal communication; Scott Landis, personal communication (4/2012).
- 24 German Baharona, Brisas de Copén Cooperative, interview (9/2010).
- 25 Marco Lowenstein, purchasing manager for Latin America at NAWPI, review comment (4/2012).
- 26 Ibid.
- 27 Ben Hodgdon, Rainforest Alliance, review comment (4/2012)
- 28 Scott Landis, GreenWood, interview (11/2011).
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- 31 Based on interview with Scott Landis, GreenWood, (11/2011).

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