

# Final Report

## Research Findings and Policy Recommendations

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This report integrates a number of previous reports and analyses to create a coherent set of recommendations for expanding markets for Mexican certified wood products. It is the result of a six-month research program that involved a number of individuals in government, academics, and industry. Considerable original research was undertaken to explore markets for certified wood products in Mexico. We focused on the supply chain and relationships therein, from the ejidos and community forests that fell timber and mill logs (collectively referred to as “certified forest mills”) to consumers in major cities that one day may have many options for purchasing finished goods made with this wood. Our purpose in this final report is to “take a step back,” and put all of the information that we were able to assemble and create into perspective.

### **Background and Introduction**

Mexico is blessed with great expanses of forest, which together cover 66% of the nation’s surface area (SEMARNAT, 2002). Of the total forest surface in Mexico, 80% is held as “social” property, 15% is private property, and 5% is government property (Anta Fonseca, 2004). The social property is typically held as ejidos (a type of governance that blends land tenure and social organization), or community land. Though in both cases the land is held in common, ejidos feature responsibility for particular tracks of land within a forest. The basic impetus for certification was the need to improve forest management in a country where deforestation was especially threatening to the health of the ecosystem. Following several legal initiatives to promote sustainable forestry, in 1994 the Mexican Council for Sustainable Silviculture began working with an international accrediting agency, SmartWood, to certify forests. The certification standard chosen was that established by the Forest Stewardship Council, or FSC. The certification requires assessments, adherence to sustainable practices, a plan for forest stewardship, and other related activities. Certification must be renewed annually. Several reports previously available to the public (Guzman and Colin, 2003; Anta Fonseca, 2004; Mota Villanueva, 2004) provide background on forest certification and the operations of certified forest mills (not all ejidos and communities owned mills, but for simplicity of terminology, we refer to them as “certified forest mills”).

Certification in Mexico has had a somewhat difficult history. While the costs were underwritten by the Mexican government (and a few non-governmental organizations, like the World Wildlife Federation), the financial benefits of certification were apparently over-sold to prospective recipients of certification. That is, as an incentive to certify, ejidos and communities were told that FSC-certified wood would command a price premium of “10-15%.” For a product that traditionally is seen as a quintessential commodity, this was an optimistic projection. The failure to capture this premium was clear in a survey completed in 2004 (Mota Villanueva, 2004). 89% of responses from forest mills replied that they had not received the expected benefits of certification. The effect was especially true for mills in the southern states like Oaxaca and Quintana Roo. In northern states like Durango, certification appeared to open some new markets for wood. Although 90% of the forest mills stated that they would continue to produce certified products even in the absence of a price premium, the question remains:

Why has certification not produced the promised financial benefits?

One explanation is simple: perhaps there is no price premium. Perhaps customers see no additional economic value in certification, except as a “tie-breaker.” That is, as compared to a non-certified product that is otherwise equivalent in all respects—including price—a buyer will choose the certified one. While this explanation is plausible, the experience to date in Mexico indicates that such an interpretation cannot be validated yet. This is because the lack of a price premium may be due to factors that can be attributed to the supply chain for certified wood products in Mexico. Indeed, as this report will outline, there are significant interruptions in the chain of custody of wood products that collectively keep customers from knowing about certified wood. Furthermore, the channels of distribution for the wood are based on traditional, commodity markets; as such, more creative marketing of the wood has not taken place.

A final reason for the lack of financial benefits for certifiers is that few certified forest mills appear to be selling to overseas markets that might value certified wood, such as America or Europe. This is not to say that there isn't export activity, but rather that it is done by manufacturers and brokers to whom the mills sell products. Guzman and Colin (2003) report success by mills in Durango and Quintana Roo, selling charcoal and precious wood, respectively, to these downstream companies. Limited experience with very specific products indicates that the certified forest mills have enjoyed a price premium when they engaged in these sales. This demonstrates that exports may offer one avenue to price premiums, and by not exploring export markets, certified forest mills give up one method for earning higher returns.

In addition to exploring the supply chain for certified wood products as they make their way to consumers, in this report we also present and discuss the results of a sophisticated analysis of Mexican consumers. In it, along with Carlos Basurto of ITESM, we use conjoint analysis to try to ascertain how certification influences buying preferences when it is blended with other buying criteria.

Though we must be careful not to overstate the results (or understate its limitations) the results of this study suggest at least the possibility of a modest price premium for certified wood products.

This report is primarily focused on the business realities in Mexico for producers of wood products. We reiterate that regardless of prospects for markets for certified wood, certification represents a best practice that is consistent with managing forests sustainably. Even if business advantages for certified wood do not materialize, the social and environmental benefits of certification are such that the program must be continued. This may require third-party payment of continuing certification costs.

### **Documents Prepared in Association with This Study**

This report reviews our findings and advances recommendations for policies that can lead to a broader market for Mexican certified wood. Our remarks are based on work performed under two contracts with the National Ecological Institute. We therefore include by reference a number of reports, surveys, and analyses, including the following:

The Market for Wood in Mexico  
By Alejandra Elizondo

FSC Certification Opportunities for Communities in Oaxaca, Mexico  
By Paul Fuge

Survey and Analysis of the Supply Chain for Mexican Certified Wood Products  
By Michael V. Russo and Santiago Lobeira

Analysis of Demand for Certified Wood:  
Report on the Mexican Consumers' Perceptions of Certified Wood Products  
By Carlos Basurto, Michael V. Russo, and Bryan Husted

Analysis of Demand for Certified Wood:  
Report on the Classification of Mexican Consumers  
By Carlos Basurto, Michael V. Russo, and Bryan Husted

Background Report on Mexican Furniture Industry  
By Michael V. Russo

Survey of Mexican Furniture Retailers: Prospects for Certified Wood Products  
By Michael V. Russo

## Findings

In this section of the report, we review findings on the market for wood products generally, and the market for certified wood products in particular. Our remarks first address the overall market for wood in Mexico, and then spotlight the supply chain for certified wood.

### The Overall Market for Wood in Mexico

A few points emerging from the study by Alejandra Elizondo are worth stressing:

- Consumption of wood (including for paper) has risen dramatically, far outstripping increases in domestic production
- In 2002, the last year for which national data are available, imports of wood represented 26% of Mexican production
- Imports of sawn wood into Mexico, primarily from Chile, Peru, and other new world suppliers have risen dramatically and taken market share away from Mexican producers.
- Imported wood is threatening to Mexican producers because foreign producers tend to be large, efficient, well-capitalized sellers. Therefore, they can underprice Mexican producers

Readers are referred to the Elizondo report for significant depth on these and other topics and trends. The takeaway for our purposes is that the Mexican market, while attractive on several levels, faces increasing competition from importers. As noted below, in several markets for finished goods (e.g., furniture) increasing competition is also coming from Asian sources, especially China.

### Certified Forest Mills

This section of the report advances some of the key findings from our survey of certified forest mills.

- The balance of social and economic goals of the forest mills, whether organized as ejidos or communities, have long histories that any initiative must respect.
- The mills are relatively small. Our sample averaged 136 employees.

- In many respects, the product is not the problem. Inspection of sawn pine at two Oaxacan mills was judged by an expert, Paul Fuge, to be superior to its Brazilian or Chilean counterparts. If this observation generalizes to other operations and quality could be stabilized in the long run, it would indicate a strength of the Mexican forest mills.
- Operations may be “undermanaged,” in several ways. First, in many of these organizations, top management positions rotate among members of the ejidos and communities. While the experience and professional capabilities of these managers may be strong, the resulting performance may not match that of an organization whose managers possess continuity of purpose and appropriate business and technical experience. Because many of the organizations are small, important contingencies like proper accounting systems may not be in place. Such systems can improve efficiency and enhance the value created by mills.
- Practices that are the result of history and long-used procedures may be stripping value from the forest products created at mills. These practices include poor yarding practices and improper grading of lumber. In particular, there is not a national lumber grading standard at present. Background on this element of operations appears in the report by Paul Fuge.
- With one tiny exception, forest mills have no experience whatsoever with exporting.
- Much value-added is lost by selling the finest grades of lumber to brokers. As the report by Russo and Lobeira shows, very little of this grade is manufactured by mills. Indeed, more than a third of the best wood the mill has to offer is simply sold at commodity prices to brokers.

### Channels of Distribution

- FSC certification aims to create a “chain of custody,” such that all organizations that process or sell wood are certified. In practice, this creates a significant problem for certified wood as it flows through channels to customers. Many downstream purchasers purchase both certified and non-certified products, so that they could not become certified without finding new sources of certified wood. This could disrupt years of commercial relationships. The FSC strategy, which stressed certifying forest rather than whole supply chains, contributed to this problem.
- The chain of customer approach could also disrupt commercial relationships in the eyes of the certified forest mills. If long term customers do not certify, the mill will lose them as customers.

- Related to this is the fact that there appear to be more “handoffs” in the chain for certified wood than is typical for wood products. This means more organizations that must certify and more chances for broken links in the chain of custody.
- There is clear evidence that the chain of custody frequently is broken with the first sale from the mill. Our study indicates that of the mills surveyed, of products destined for further production (i.e. those sold as intermediate goods and raw materials), only between 22 and 40% are sold to customers who themselves are certified.
- With virtually no direct export activity on the part of certified forest mills that we could identify, no certified wood is sold in countries that may value it more highly.
- There is little evidence that certified wood products are sold in channels in Mexico that might appreciate those goods. This is partly due to the relative absence of such channels, such as environmentally-sensitive building outlets. There has been little effort to raise awareness of certification farther down the distribution channels.

## Customers

- Knowledge of certification is sharply limited, both on the part of retailers (based on our survey of furniture retailers) and also on the part of end customers. This generates risk for those selling certified products, because there is little “track record” on which to base decisions
- The conjoint analysis conducted by Basurto, Russo, and Husted found that certification was a strong factor in potential purchasing decisions. But the report indicates a clear possibility that properly marketed, a small price premium may be obtained for certified wood products. The report provides a number of caveats for this finding, chiefly, that we measured purchasing intent rather than actual purchasing behavior. But the analysis also was more sophisticated than surveys in which customers are asked whether or not they would pay more for green products.
- A pilot program with the furniture giant IKEA and one ejido, Pueblo Nuevo, was not successful. There are a number of reasons for this outcome, but it at least indicates the possibility for the type of agreement that would link customer and mill more directly. This would address some of the issues with the number of handoffs noted above.

## Policy Recommendations

In this section, we offer a number of options for addressing some of the problems faced by certified forest mills. We organize this section with a series of what we call “options.” We stress that these options are not mutually exclusive, although some combinations will work together better than others. After advancing these options, we provide a simple, first-cut assessment of each, attempting to be respectful of the social mission of ejidos and communities, the challenges and opportunities of the Mexican marketplace, and the realities of global competition.

Option 1: Change little, but have the government continue to underwrite certification.

This option is intended to represent the “business as usual” approach and to allow us to develop insights into what might occur with continuation of current practices.

**Advantages.** As the status quo, in some respects this is the lowest-impact alternative. It will not challenge the forest mills’ long-standing practices nor impose new restrictions on them. This approach recognizes the “public good” aspects of the natural environment and the services that flow from it (carbon sequestration, species conservation, etc). In such situations, government support can be a proper response.

**Disadvantages.** A number of the producers are complaining about certification, finding that it adds constraints without additional benefits. One ejido with which we spoke, Pueblo Mancomunados, dropped its certification, claiming that it made no difference to their customers. Pursuing the status quo also will deter important changes that must be made for Mexican forest mills to remain economically healthy in the face of increasing competition from imports. Such a program by itself is unlikely to broaden participation in certification efforts. Finally, it could lead to further attrition by certified organizations if the non-financial costs of certification prove large.

Option 2: Use government policy to provide more information to consumers and promote the purchase and use of certified products.

This approach stresses the dissemination of information to potential buyers of certified goods. At present, there is a clear lack of knowledge at levels close to the customer, including retailers. This approach seeks to bridge the information gap and will also require some promotional efforts. It also will require greatly improved labeling and documentation efforts.

**Advantages.** If retailers and other sellers hear that their customers desire certified wood, this will translate upstream and draw more certified wood. This type of initiative, if properly planned, can elicit investment in dedicated channels and other outlets that exclusively sell certified products. This option could work well with several of the other options. Labeling options also can be used to create a special distinction for the first group of certified forest mills. For example, these first certifiers could be given special status as “certification pioneers,” or some other recognition that will confer lasting value.

**Disadvantages.** This type of regulation via information may be new to the Mexican marketplace. It may require SEMARNAT or some other office in the Mexican government to “certify the certifiers,” especially if the forest products industry attempts to create a parallel certification scheme for wood (as occurred in the United States). If the Mexican government introduces a new certification scheme, it will have to be operated efficiently and effectively. Some industries may not be ready to change suppliers to accommodate these markets.

Option 3: Use government policy to create new demand for certified products.

This option considers the downstream end of the supply chain for certified wood products. The Mexican government—at the federal, state, or even local level—can initiate a purchasing program that favors certified products. It can also use policies to mandate the use of certified products by others. An example of this latter approach would be the establishment of green standards for government buildings.

**Advantages.** There is a model for this program, the program in Oaxaca to purchase children's furniture for schools from certified mills. The program has been successful and has generated considerable good will among the involved parties. It would be possible for the government to create a number of buying programs, including for lumber used in state buildings or other uses for which it purchases wood products.

**Disadvantages.** The program can create tension with non-certified operations. In Oaxaca, this was resolved by purchasing children's furniture from non-certified sources along with certified ones. Such a program also may shield mills from competitive realities and turn their attention away from the niche markets into which they need to sell. Government intervention can create inefficiencies.

Option 4: Subsidize or otherwise promote the creation of new professionally-managed manufacturing capacity in centralized locations that can process highest grades of wood into value-added products.

This option would envision creating new manufacturing capacity in centralized locations (e.g., Oaxaca) that are close enough to the certified forest mills to acquire supplies from a number of them.

Advantages: There is a good chance that such an arrangement would replace sales of top-grade wood to brokers, which should be the least disruptive of any changes that might occur. By using solely certified products and manufacturing them, such a plant would go a very long way toward resolving the breaks in the chain of custody that plague certified wood products. Importantly, such a plant would provide a genuine incentive to certify or retain certification by providing a buyer that requires certified wood. It is also likely that by purchasing from a number of certified forest mills, the ups and downs of productions within individual mills can be smoothed out, creating greater assurance of supply—and therefore of the plant's production schedule. A plant of this size could create the necessary scale to sell to export markets. Professional management would aid its mission. Some type of profit-sharing with the certified forest mills is possible if the government provides some financing.

Disadvantages: There are a number of issues with this plan. First, of course, some entity—public or private—must step up and invest the necessary capital to build the plant. It will take time to site, finance, and build the plant. Second, care must be taken to deal with the possibility that the plant's output could compete with the outputs of the certified forest mills. If this occurs, and demand for the products of the mills declines, it will threaten the economic and social missions of the forest mills. (This is not an insurmountable problem. For example, since no mills export now, if the plant was organized solely to sell to export markets, this competition might not materialize). Finally, the certified forest mills will need to bring business standards up to modern business expectations.

Option 5: Work with large purchasers that have specific buying programs for certified wood products, such as IKEA or Home Depot.

This option focuses on improving the channel of distribution directly to one or more large buyers.

**Advantages.** This option creates a steady market for certified products, selling to customers that have corporate policies and clear track records of promoting sustainable forestry. Selling to such demanding customers will force forest mills to upgrade their approach to markets and expose them to the discipline necessary to sell in international markets. Initial sales of sawn wood can lead to sales of secondary products at a later date, creating more value-added for Mexican producers. This option can create visibility for Mexican certified wood products.

**Disadvantages.** The pilot program between Pueblo Nuevo and IKEA was terminated. It is not clear that at this point whether the certified forest mills have the discipline necessary for such a relationship. The plan may be risky because it depends on placing a lot of trust in a very few buyers. Furthermore, buyers, being large, may exercise muscle in contracting and extract too much of the value-added. Volumes necessary to support contracts may require consolidation of multiple mills' output, requiring an intermediary. Under this option, it may be difficult to capture a price premium for wood. Furthermore, the terms of trade with large purchasers—which may specify a period of up to 120 days until they pay suppliers—may represent an unfair relationship for those suppliers.

Option 6: Stimulate the development of niche markets for certified wood products within Mexico.

This option stresses national, niche markets for certified wood products. Examples of niche markets include:

- green building supplies
- use in conjunction with other environmentally-oriented businesses, like packaging for organic foods
- specialty furniture retail stores in “enlightened” neighborhoods

Advantages. Such outlets might be the most promising for receiving a price premium for certified wood products. One important reason is that sensitivity to green products increases with education and income, and these attributes are higher for the customers of most of these businesses. The local connection (“made in Mexico for Mexicans”) could be a good selling advantage. Location in Mexico is easier for certified forest mills to serve.

Disadvantages. At present, these are very underdeveloped markets, and for the foreseeable future, they may well be quite small in relation to the productive capacities of the certified forest mills. This option probably is not enough to create the necessary economic improvements for those mills.

Option 7: Take steps to begin exporting certified wood products.

As noted in the introduction, there has been some export activity by companies that purchase certified wood products. Mexico has geographic advantages that could allow its certified forest mills to increase their exports to countries with buyers that value certification, improving prospects for receipt of a price premium.

**Advantages.** This option could expand markets for certified wood generally. To the extent that purchasers reside in countries that value environmental certification, there might be a price premium available. It can begin to create the type of knowledge of export markets that could serve the certified forest mills well in future years. And this plan will likely not disrupt operations at the mills in a way that will threaten their social mission. Markets in the United States are closer than those of Guatemala, Brazil, and other Latin and South American competitors.

**Disadvantages.** As noted, certified forest mills have no experience with exporting. This option will require the development of a new type of brokers, who will purchase certified wood, keep it segregated from other types of wood, and find buyers for it in export markets. This is a task that traditionally has been very poorly served by government involvement. If there is a price premium, care will have to be taken to ensure that it is shared by the brokers and the mills. Buyers in more developed countries are likely more demanding of quality, though this can also serve to inject discipline into forest mill operations.

## Conclusion

Business strategists often argue that “there is no such thing as a commodity.” This viewpoint is based on the notion that imaginative management and marketing of any good can create value that will be reflected in broadening demand for the product and perhaps a higher price. One farmer’s tomatoes may be indistinguishable from another’s, but not if the first farmer reliably brings them to the store each and every day and pleasantly displays them for customers. The situation for certified wood products is considerably better than selling tomatoes, because in fact this wood is differentiated by its source and mode of production. The problem, for the most part, is that these wood products often are being sold like undifferentiated tomatoes. It is a difficult task, but certification must be used to differentiate wood.

Regardless of what strategies are used to promote sales of certified wood products, in order to broaden demand and create possibilities for price premiums, each action must be weighed against a single critical criterion:

*Are we selling to customers that value environmental certification?*

If the answer is no, the seller will continue to be pitted against all other sellers in a commodity market that offers no possibility for earning premium returns. If the answer is yes, certification will act at least as a “tie-breaker,” but potentially also may yield a price premium.

As we discuss in the report, to facilitate reaching these customers a number of structural initiatives are necessary. The overall thrust of most of them is to reduce the number of independent hands through which certified wood and manufactured products must pass, and to find ways to bring together the outputs of mills so that they are not co-mingled with non-certified products. It is possible that the social element of the communities surrounding forest mills may provide a context that will allow groups of mills to work together to promote their common goals. In this way, their social mission may contribute to their economic mission, and together lead them ahead.

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